

**PowerLite®
84+/85+/824+/825+/826W+
Multimedia Projector**

User's Guide

Important Safety Information

WARNING: Never look into the projector lens when the lamp is turned on; the bright light can damage your eyes. Never let children look into the lens when it is on. Never open any cover on the projector, except the lamp and filter covers. Dangerous electrical voltages inside the projector can severely injure you. Except as specifically explained in this *User's Guide*, do not attempt to service this product yourself. Refer all servicing to qualified service personnel.

WARNING: The projector and its accessories come packaged in plastic bags. Keep plastic bags away from small children to avoid any risk of suffocation.

Caution: When you replace the lamp, never touch the new lamp with your bare hands; the invisible residue left by the oil on your hands may shorten the lamp life. Use a cloth or glove to handle the new lamp.

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Welcome

The PowerLite® 84+/85+/824+/825+/826W+ is an easy-to-use projector that weighs less than 7 pounds. From classrooms to boardrooms, your full-color presentations and videos will be bright and vibrant even in ordinary indoor lighting. You can connect the projector to a wide range of computers and video sources. With the PowerLite 85+/824+/825+/826W+, you can project from a USB storage device. With the PowerLite 85+/825+/826W+, you can project over your wired network or, with the optional Wireless 802.11a/b/g Module, you can project over an 802.11g, 802.11b, or 802.11a wireless network.

Easy setup, control, and security:

- 8.5-second startup time and Instant Off® feature for fast setup and shut down
- Automatic digital keystone correction
- Closed captioning
- 1.6x optical zoom lens for flexible placement and positioning
- USB projection for quick and easy connection
- 10 Watt speaker and microphone input
- Security features including password, user's logo, security slot (for a Kensington MicroSaver® theft deterrent device), security bar (for a theft deterrent wire lock) and the ability to lock the projector buttons
- A/V Mute slide to temporarily turn off the image and sound, ideal for breaks or when you want to redirect your audience's attention
- Project up to four different images from one computer (85+/825+/826W+ only)

- Project only the PowerPoint® slide images while viewing handout notes and controls on the computer screen (85+/825+/826W+ only)
- Project from a thumb drive or other USB storage device (85+/824+/825+/826W+ only)
- A Message Broadcasting plug-in (85+/825+/826W+ only) that allows you to project timely alerts and messages to all networked projectors (to download both the plug-in and its instructions, visit Epson's support website at www.epson.com/support and select your product)

Using Your Documentation

This electronic *User's Guide* provides detailed instructions on using your projector.

In addition, your projector CD-ROM may include the *EasyMP Network Projection Operation Guide* (85+/825+/826W+ only) and the *EasyMP Monitor Operation Guide* (84+/85+/825+/826W+ only). Refer to *EasyMP Network Projection Operation Guide* for detailed instructions on giving presentations over a network. Refer to the *EasyMP Monitor Operation Guide* for detailed instructions on monitoring the projector from a remote location. To set up your projector for the first time on a network, see page 63 of this *User's Guide*.

Please follow these guidelines as you read through this manual:

- Warnings must be followed carefully to avoid bodily injury.
- Cautions must be observed to avoid damage to your equipment.
- Notes contain important information about your projector.
- Tips contain additional projection hints.

Getting More Information

Need troubleshooting tips? Quick steps for setting up your projector? Here's where you can look for help:

- **Quick Setup sheet**
Gives you the instructions you need to get your projector up and running.
- **Built-in help system**
Provides assistance for common problems. Available from the ? Help button on the projector or the remote control. See page 132 for details.
- **epson.com/support**
Download FAQs and e-mail your questions to Epson support.
- **PrivateLine support**
If you still need help after checking this *User's Guide* and the sources listed above, you can use the Epson PrivateLine® Support service to get help fast. Call (800) 637-7661 and enter the PIN on the PrivateLine card. Or take advantage of Epson's automated support services 24 hours a day. See page 149 for more information.

Registration and Warranty

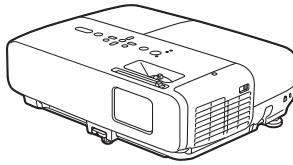
Your projector comes with a warranty that lets you project with confidence. For details, see the warranty statement included with your projector.

In addition, Epson offers free Extra CareSM Road Service. In the unlikely event of an equipment failure, you won't have to wait for your unit to be repaired. Instead, Epson will ship you a replacement unit anywhere in the United States or Canada. See the brochure included with your projector for details.

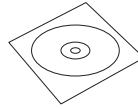
Register online using your projector CD or at <http://www.epson.com/webreg>. Registering also lets you receive special updates on new accessories, products, and services.

Unpacking the Projector

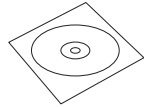
After unpacking the projector, make sure you have all the parts shown below:



Projector



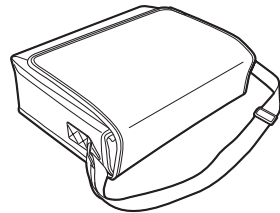
PDF manual and
registration CD-ROM



Projector software
CD-ROM
(84+/85+/825+/
826W+ only)



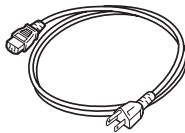
Remote control and
2 AA batteries



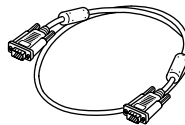
Carrying case



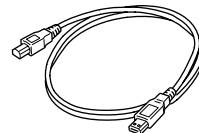
Security sticker



Power cord



VGA computer cable

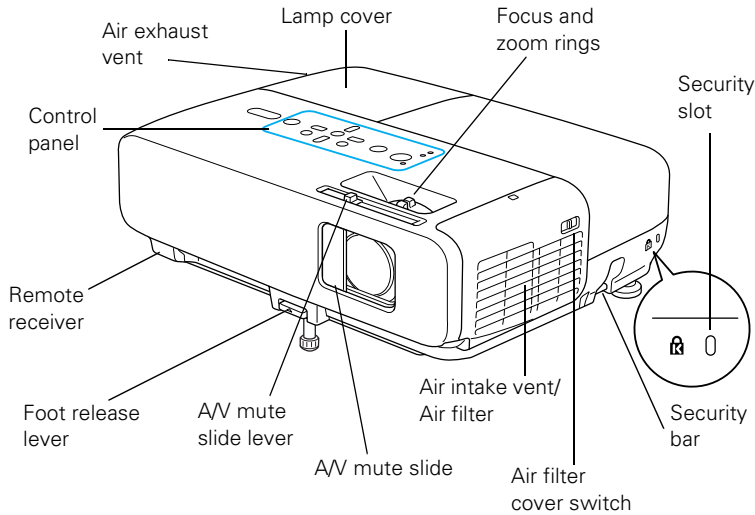


USB cable

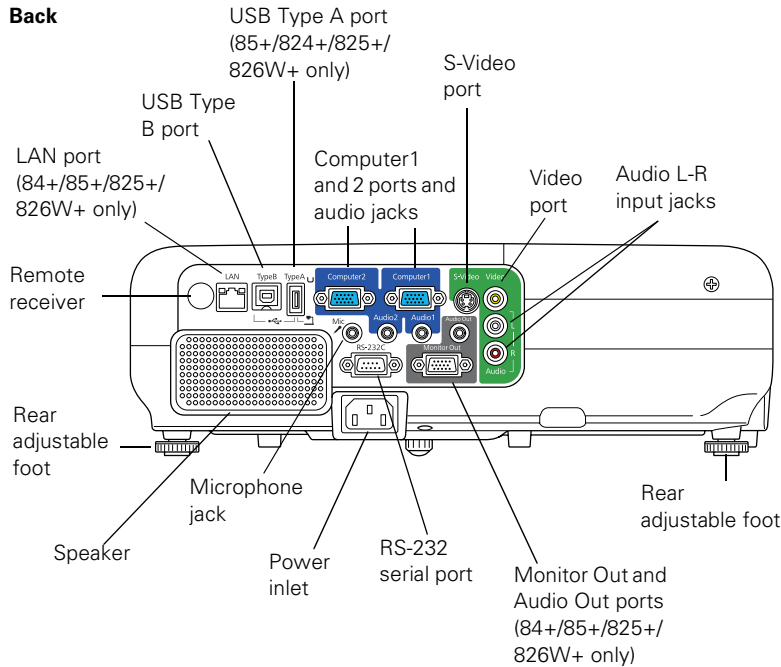
Save all packaging in case you need to ship the projector. Always use the original packaging (or the equivalent) when you need to send the projector to another location. If you are moving the projector by hand, use the carrying case. See page 129 for transportation instructions.

Projector Parts

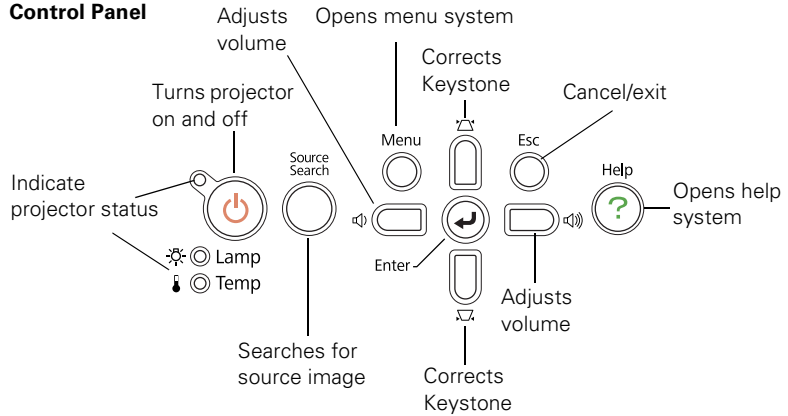
Front



Back



Control Panel



Additional Components

Depending on how you plan to use the projector, you may need additional components:

- To receive an S-video signal, you'll need an S-video cable. One may be provided with your video equipment, or you can purchase one from Epson; see the list on page 13.
- To receive a component video signal from a DVD player or other video device, you'll need an component-to-VGA video cable. You can purchase one from Epson; see the list on page 13.
- To play sound through your projector you will need an audio cable. One may be provided with your equipment, or you can purchase one from an electronics store.

Optional Accessories

To enhance your use of the projector, Epson provides the following optional accessories:

| Product | Part number |
|--|--|
| Genuine Epson projector lamp | V13H010L50 |
| Air filter replacement set (2 filters) | V13H134A22 |
| DC-10s document camera | ELPDC10S |
| DC-06 document camera | V12H321001 |
| Wireless 802.11a/b/g Module (PowerLite 85+/825+/826W+ only) | V12H306P11 |
| Quick Wireless Connection USB key (ELPAP05) (PowerLite 85+/825+/826W+ only) | V12H005M05 |
| Wheeled soft carrying case Soft shoulder carrying case Molded hard shell wheeled carrying case SwissGear® backpack | ELPKS62 ELPKS61 ELPKS58 ELPKS63 |
| Universal projector ceiling mount Advanced projector ceiling mount High security projector ceiling mount Adjustable suspended ceiling channel kit Suspended false ceiling plate kit Structural round ceiling plate Adjustable extension column, 8 to 11 inches | ELPMBPJF ELPMBPRG ELPMBATA ELPMBP01 ELPMBP02 ELPMBP03 ELPMBC01 |
| Kensington® MicroSaver® security lock | ELPSL01 |
| Duet™ portable projector screen 50-inch portable screen (4:3 aspect ratio) 80-inch portable pop-up screen (4:3 aspect ratio) | ELPSC80 ELPSC06 ELPSC08 |
| Component-to-VGA video cable S-Video cable | ELPKC19 ELPSV01 |
| Distribution amplifier | ELPDA01 |
| AP-60 Projector Sound Solution | V12H329020 |

You can purchase screens, carrying cases, or other accessories from an Epson authorized reseller. To find the nearest reseller, call 800-GO-EPSON (800-463-7766). Or you can purchase online at www.epsonstore.com (U.S. sales) or www.epson.ca (Canadian sales).

1 *Displaying and Adjusting the Image*

Whether you're presenting from a computer or video equipment, you need to follow some basic steps to display your image on the screen.

Follow the guidelines in this chapter for:

- Positioning the projector
- Turning the projector on and off
- Selecting the image source
- Adjusting the image

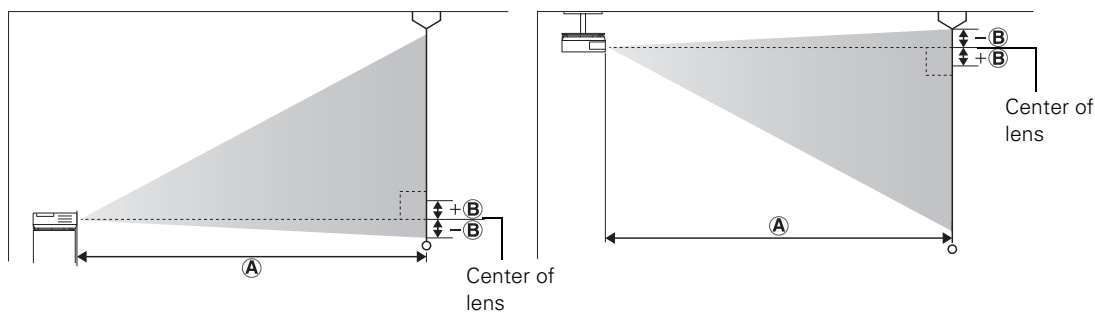
note
You can mount the projector on the ceiling, or place it behind a translucent screen for rear projection. See page 151 for details.

Positioning the Projector

If the projector isn't already installed in the room you're using, you'll probably want to place it on a table in front of the screen. This lets you stand in the front of the room, face the audience, and remain close enough to the equipment to be able to control it. Try to leave as much space as possible between the projector and the screen to get a good-size image.

Use the illustrations and tables below to help you determine placement. Image size increases with distance, but can vary depending on how you position the zoom ring and whether you've adjusted the image with other settings.

You can also use the [Image Size Calculator](#) on the Epson website.



PowerLite 84+/85+/824+/825+ (4:3 images)

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|-------------|---|-------------------------|
| 30 inches | 33 to 54 inches (83 to 136 cm) | -1.8 inches (-5 cm) |
| 40 inches | 44 to 72 inches (111 to 182 cm) | -2.5 inches (-6 cm) |
| 50 inches | 55 to 90 inches (140 to 229 cm) | -3.1 inches (-8 cm) |
| 60 inches | 66 to 108 inches (169 to 275 cm) | -3.7 inches (-9 cm) |
| 80 inches | 89 to 145 inches (226 to 368 cm) | -4.9 inches (-13 cm) |

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|--------------------|---|--------------------------|
| 100 inches | 111 to 181 inches (283 to 460 cm) | -6.2 inches (-16 cm) |
| 150 inches | 168 to 272 inches (426 to 692 cm) | -9.2 inches (-23 cm) |
| 200 inches | 224 to 363 inches (568 to 923 cm) | -12.3 inches (-31 cm) |
| 250 inches | 280 to 455 inches (711 to 1155 cm) | -15.4 inches (-39 cm) |
| 300 inches | 336 to 546 inches (854 to 1386 cm) | -18.5 inches (-47 cm) |

PowerLite 84+/85+/824+/825+ (16:9 images)

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|--------------------|---|----------------------|
| 28 inches | 33 to 55 inches (84 to 138 cm) | 0.4 inches (1 cm) |
| 30 inches | 36 to 58 inches (91 to 149 cm) | 0.4 inches (1 cm) |
| 40 inches | 48 to 78 inches (122 to 199 cm) | 0.6 inches (1 cm) |
| 50 inches | 60 to 98 inches (153 to 249 cm) | 0.7 inches (2 cm) |
| 60 inches | 72 to 118 inches (184 to 300 cm) | 0.9 inches (2 cm) |
| 80 inches | 97 to 158 inches (246 to 401 cm) | 1.2 inches (3 cm) |
| 100 inches | 121 to 197 inches (308 to 502 cm) | 1.5 inches (4 cm) |

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|--------------------|---|----------------------|
| 150 inches | 183 to 297 inches (464 to 754 cm) | 2.2 inches (6 cm) |
| 200 inches | 244 to 396 inches (619 to 1006 cm) | 2.9 inches (7 cm) |
| 250 inches | 305 to 495 inches (775 to 1258 cm) | 3.7 inches (9 cm) |
| 275 inches | 336 to 545 inches (853 to 1384 cm) | 4 inches (10 cm) |

PowerLite 84+/85+/824+/825+ (16:10 images)

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|--------------------|---|------------------------|
| 29 inches | 33 to 55 inches (85 to 140 cm) | -0.4 inches (-1 cm) |
| 40 inches | 47 to 76 inches (118 to 193 cm) | -0.5 inches (-1 cm) |
| 50 inches | 58 to 95 inches (149 to 243 cm) | -0.6 inches (-2 cm) |
| 60 inches | 70 to 115 inches (179 to 292 cm) | -0.7 inches (-2 cm) |
| 70 inches | 82 to 134 inches (209 to 341 cm) | -0.9 inches (-2 cm) |
| 80 inches | 94 to 153 inches (239 to 390 cm) | -1 inches (-2 cm) |
| 100 inches | 118 to 192 inches (300 to 488 cm) | -1.2 inches (-3 cm) |
| 150 inches | 178 to 289 inches (451 to 733 cm) | -1.8 inches (-5 cm) |
| 200 inches | 237 to 385 inches (603 to 979 cm) | -2.5 inches (-6 cm) |
| 250 inches | 297 to 482 inches (754 to 1224 cm) | -3.1 inches (-8 cm) |
| 280 inches | 333 to 540 inches (845 to 1371 cm) | -3.4 inches (-9 cm) |

PowerLite 826W+ (16:10 images)

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|--------------------|---|------------------------|
| 30 inches | 35 to 57 inches (88 to 144 cm) | -0.4 inches (-1 cm) |
| 40 inches | 47 to 76 inches (118 to 193 cm) | -0.5 inches (-1 cm) |
| 50 inches | 58 to 95 inches (149 to 243 cm) | -0.6 inches (-2 cm) |
| 60 inches | 70 to 115 inches (179 to 292 cm) | -0.7 inches (-2 cm) |
| 80 inches | 94 to 153 inches (239 to 390 cm) | -1 inches (-2 cm) |
| 100 inches | 118 to 192 inches (300 to 488 cm) | -1.2 inches (-3 cm) |
| 150 inches | 178 to 289 inches (451 to 733 cm) | -1.8 inches (-5 cm) |
| 200 inches | 237 to 385 inches (603 to 979 cm) | -2.5 inches (-6 cm) |
| 250 inches | 297 to 482 inches (754 to 1224 cm) | -3.1 inches (-8 cm) |
| 280 inches | 333 to 540 inches (845 to 1371 cm) | -3.4 inches (-9 cm) |

PowerLite 826W+ (4:3 images)

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|--------------------|---|------------------------|
| 25 inches | 33 to 54 inches (83 to 136 cm) | -0.3 inches (-1 cm) |
| 30 inches | 39 to 65 inches (100 to 164 cm) | -0.4 inches (-1 cm) |
| 40 inches | 53 to 86 inches (134 to 219 cm) | -0.6 inches (-1 cm) |
| 50 inches | 66 to 108 inches (169 to 275 cm) | -0.7 inches (-2 cm) |

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|--------------------|---|------------------------|
| 60 inches | 80 to 130 inches (203 to 331 cm) | -0.8 inches (-2 cm) |
| 80 inches | 107 to 174 inches (271 to 442 cm) | -1.1 inches (-3 cm) |
| 100 inches | 134 to 218 inches (340 to 553 cm) | -1.4 inches (-4 cm) |
| 120 inches | 161 to 261 inches (408 to 664 cm) | -1.7 inches (-4 cm) |
| 150 inches | 201 to 327 inches (511 to 831 cm) | -2.1 inches (-5 cm) |
| 200 inches | 269 to 436 inches (682 to 1108 cm) | -2.8 inches (-7 cm) |
| 250 inches | 336 to 546 inches (854 to 1386 cm) | -3.5 inches (-9 cm) |

PowerLite 826W+ (16:9 images)

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|--------------------|---|----------------------|
| 28 inches | 33 to 55 inches (84 to 138 cm) | 0.4 inches (1 cm) |
| 30 inches | 36 to 58 inches (91 to 149 cm) | 0.4 inches (1 cm) |
| 40 inches | 48 to 78 inches (122 to 199 cm) | 0.6 inches (1 cm) |
| 50 inches | 60 to 98 inches (153 to 249 cm) | 0.7 inches (2 cm) |
| 60 inches | 72 to 118 inches (184 to 300 cm) | 0.9 inches (2 cm) |
| 80 inches | 97 to 158 inches (246 to 401 cm) | 1.2 inches (3 cm) |
| 100 inches | 121 to 197 inches (308 to 502 cm) | 1.5 inches (4 cm) |

| Screen size | Projection distance (A) Wide to Tele | Offset (B) |
|-------------|---|----------------------|
| 150 inches | 183 to 297 inches (464 to 754 cm) | 2.2 inches (6 cm) |
| 200 inches | 244 to 396 inches (619 to 1006 cm) | 2.9 inches (7 cm) |
| 250 inches | 305 to 495 inches (775 to 1258 cm) | 3.7 inches (9 cm) |
| 275 inches | 853 to 1384 inches (83 to 136 cm) | 4 inches (10 cm) |

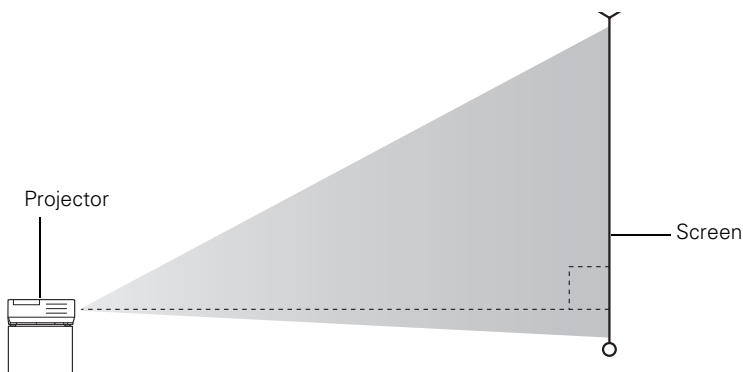
note

After positioning the projector, you may want to connect a Kensington MicroSaver® anti-theft device to the lock port on the projector. You can purchase this from Epson; see page 13.

Also keep these considerations in mind:

- Place the projector on a sturdy, level surface.
- Make sure there is plenty of space for ventilation around and under the projector.
- Make sure the projector is within 9 feet (2.7 meters) (PowerLite 84+/85+/825+/826W+) or 5 feet (1.5 meters) (PowerLite 824+) of a grounded electrical outlet or extension cord.

Ideally, you should place the projector directly in front of the center of the screen, facing it toward the screen squarely. The base of the lens should be at about the level of the bottom of the screen.



If you place the projector below screen level, you'll have to tilt it up by extending the front adjustable foot. This causes the image to become "keystone" shaped, but you can correct the distortion by pressing the buttons on the projector. See page 28 for detailed information about correcting the image shape.

For instructions on installing the projector in a permanent location, such as a theater or conference room, see page 151.

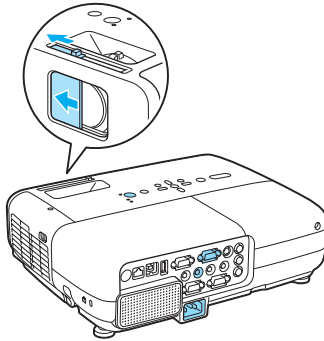
Turning the Projector On and Off

Make sure your projector and any computer or video equipment are connected as described on page 47. Turn on your connected equipment before starting the projector so it can automatically detect and display the image source. If you turn on the projector first, or have multiple pieces of connected equipment, you may have to select the image source manually (see page 25).

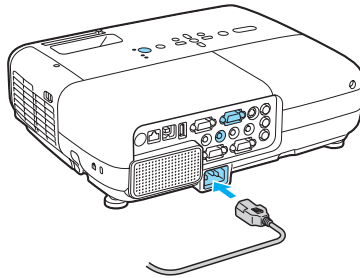
Turning On the Projector

Follow these steps to turn on the projector:

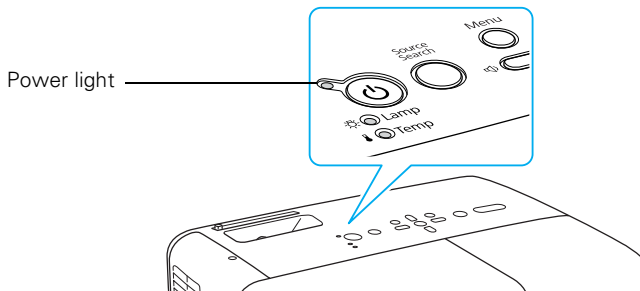
1. Open the A/V Mute slide (lens cover).



2. Plug one end of the power cable into the projector, and the other end into an electrical outlet.




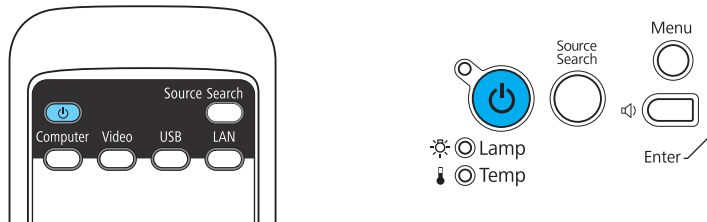
The  power light turns orange.



note



You can set the projector to automatically turn off the lamp and enter “sleep mode” when it has not received any signals or the A/V Mute slide remains closed for a period of time. This conserves electricity, cools the projector, and extends the life of the lamp. To enable sleep mode, see page 117.

3. Press the  power button on the remote control or on top of the projector.




warning

Never look into the lens when the lamp is on. This can damage your eyes, and is especially dangerous for children and pets.

The projector beeps once and the  power light flashes green as the projector warms up, then an image begins to appear. When the  power light stops flashing and remains green, the projector is ready for use.

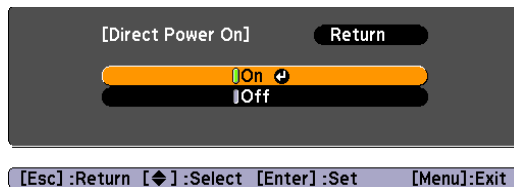
4. If you are prompted to enter a password, see page 111.

Using the Direct Power On Function

The Direct Power On function enables faster setup. The projector will start up automatically when you plug it in; you won't have to press the  power button.

Follow these steps to enable Direct Power On:

1. Press the **Menu** button on the remote control and select the **Extended** menu.
2. Choose **Operation** and press **Enter**.
3. Choose **Direct Power On** and press **Enter**.



4. Highlight **On** and press **Enter**.
5. Press **Esc** or **Menu** to exit. The setting will take effect the next time you plug in the projector.

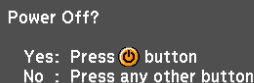
Shutting Down the Projector

This projector incorporates Instant Off technology. To turn the projector off, you can press its ⏻ power button as described below, or turn off a power switch that supplies power to the projector. You don't have to wait for the projector to cool off first.

1. To turn off the projector, press the ⏻ power button on the remote control or projector.

You see a confirmation message.

(If you don't want to turn it off, press any other button.)



Power Off?
Yes: Press ⏻ button
No : Press any other button

2. Press the ⏻ power button again. When the ⏻ power light stops flashing and you hear two beeps, unplug the power cord.

If you want to turn the projector on again, make sure the orange ⏻ power light is not flashing, then press the ⏻ power button.

3. If you extended the adjustable front foot, press up on the foot release lever to retract it.
4. Close the A/V Mute slide.

note

Lamp life results will vary depending on mode selected, environmental conditions, and usage.

Turn off this product when not in use to prolong the life of the projector.

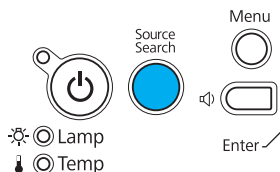
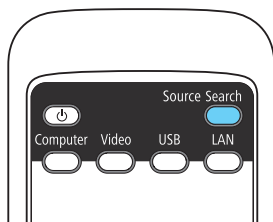
Selecting the Image Source

Selecting the image source lets you switch between images input from different pieces of connected equipment (such as a computer or DVD player).

If you don't see the image you want, press the **Source Search** button on the remote control or projector until you see the image you want to project.

note

To focus and adjust the image, see page 26. If a projected image fails to appear, see page 136 for help.



You can also use the **Computer**, **Video**, and **USB** buttons on the remote control to switch between devices connected to the ports identified on each button, or select **LAN** to project through your network (the **LAN** button does not work with the PowerLite 84+ or 824+). See page 33 for more information.

Adjusting the Image

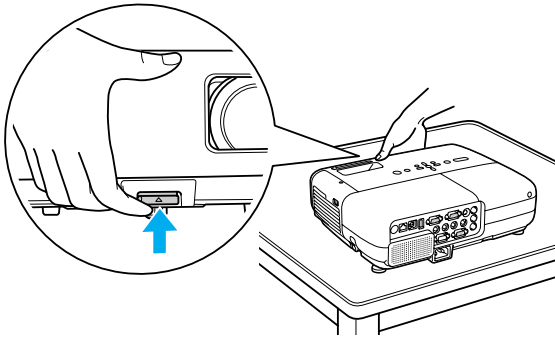
Once you see your image, you need to make certain adjustments:

- If the image is too high or too low, you can reposition it. See page 27.
- To focus or zoom your image, see page 27.
- If the image isn't square, see page 28.
- If a computer image displays incorrectly, see page 30.
- If you need to fine-tune the image and/or sound, see page 101.

Adjusting the Height of Your Image

If the image is too low on the screen, you can use the front adjustable foot to raise it.

1. Stand behind the projector. Press the foot release lever up and lift the front of the projector.



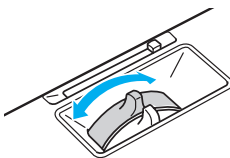
2. Once the image is positioned where you want it, release the lever to lock the foot in position.
3. If necessary, you can fine-tune the height or level of the image by turning the projector's adjustable rear feet.

Raising the projector causes the image to distort or “keystone,” but you can correct the shape as described on page 28.

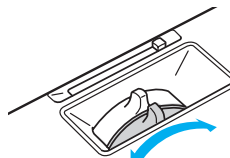
Focusing and Zooming Your Image

Turn the focus ring on the projector to sharpen the image.

Turn the zoom ring on the projector to reduce or enlarge the image.



Focus



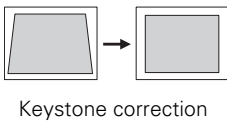
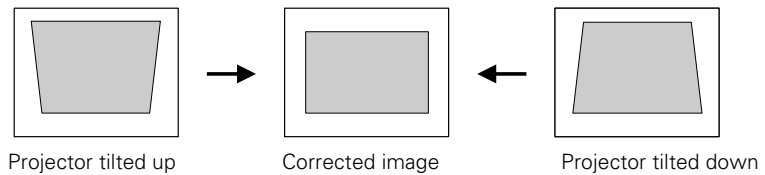
Zoom

If the image still isn't large enough, you may need to move the projector farther away from the screen. You can also use the **E-Zoom** buttons on the remote control to zoom in on a portion of the image. See page 35 for instructions.

Adjusting the Image Shape

In most cases, you can maintain a square or rectangular image by placing the projector directly in front of the center of the screen with the base of the lens level with the bottom of the screen.

Even if the projector is slightly tilted (within a range of 30° up or down), the projector has an automatic keystone correction function that detects and corrects vertical keystone distortion.



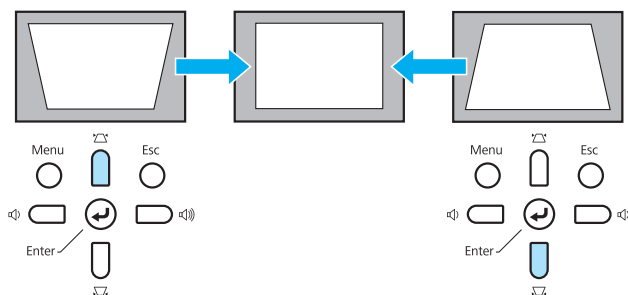
It takes about one second after projection starts for the image to be corrected. During this time, a vertical keystone correction gauge appears on the screen.

If your image is still distorted, you can correct it using the Keystone buttons on the projector's control panel or the projector's Setting menu.

Using Keystone Correction

To adjust your image when it is wider on the top or bottom, do the following:

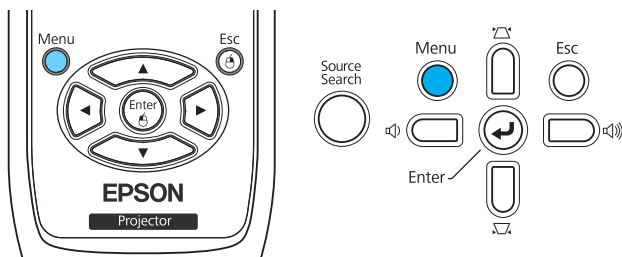
- Press one of the two keystone correction buttons on the projector's control panel, as shown below. Continue pressing the button until you are satisfied with the shape of the image.




tip

You can display a test pattern to help align the image (see page 109).

- Or press the **Menu** button on the remote control or projector, select the **Settings** menu, and press **Enter**.



From the Settings menu, select **Keystone** and press **Enter**. Use the  pointer buttons on the remote control to adjust the keystone setting as needed.

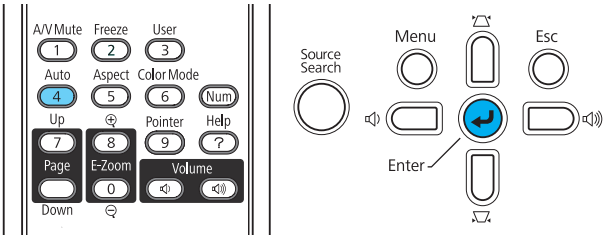
If the image quality declines (for example, lines or edges look jagged), reduce the sharpness setting. See page 105.

note

The Auto button works only with computer images projected through the VGA port.

Correcting Computer Images

If you're connected to a computer and the image doesn't look right, press the **Auto** button on the remote control or the **Enter** button on the projector. This automatically resets the projector's tracking, sync, resolution, and position settings.



If the **Auto** button doesn't correct the problem, you may need to adjust the tracking or sync using the projector's Signal menu. See page 106 for more information.

2

Using the Remote Control

The projector includes a number of tools to enhance your presentation. All of them can be accessed using the remote control, which lets you operate the projector from anywhere in the room—up to 20 feet away.

You can use the remote control to adjust the picture and sound (page 33) or to adjust the color mode for various environments (page 38). You can also use it as a wireless mouse when projecting from a computer (page 41) or as a pointer to highlight your presentation (page 42).

This chapter covers:

- Using the remote control
- Controlling the picture and sound
- Operating your computer with the remote control
- Highlighting your presentation

note

If a button is pressed longer than 30 seconds, the remote control stops operating to conserve power. When you release the button, normal operation resumes.

caution

When replacing batteries, take the following precautions:

- *Replace the batteries as soon as they run out. If the batteries leak, wipe away battery fluid with a soft cloth. If fluid gets on your hands, wash immediately.*
 - *Do not expose batteries to heat or flame.*
 - *Dispose of used batteries according to local regulations.*
 - *Remove the batteries if you won't be using the projector for a long period of time.*
-

Using the Remote Control

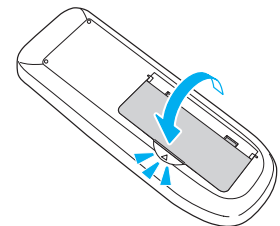
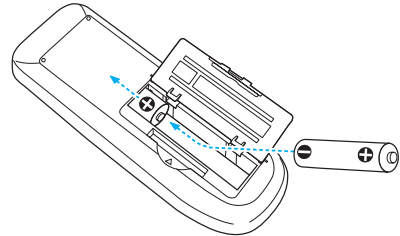
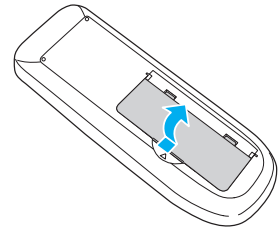
Follow these tips for using the remote control:

- Point the remote control at the projector.
- Stand within 20 feet of the projector.
- Avoid using the remote under bright fluorescent lamps or in direct sunlight, or the projector may not respond properly.

Replacing the Batteries

Replace the batteries as described below:

1. Turn the remote control over.
2. Press the tab on the battery cover to open it.
3. Install two AA batteries, inserting the + and – ends as shown.
4. Close the cover, pressing it down until it snaps into place.



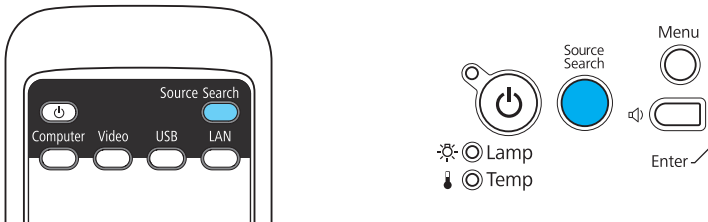
Controlling the Picture and Sound

You can use the remote control to preview and select your picture sources, temporarily turn off the picture and sound, freeze the action, zoom in on the picture, and adjust the volume.

Switching Between Picture Sources

If your projector is connected to more than one computer and/or video source, you can switch between the different sources:

- The easiest way to select your source is to press the **Source Search** button on the remote control or projector repeatedly until you see the image you want on the screen.



- On the remote control, there are four buttons you can use to switch between equipment connected to the port identified on each button:

Press the **Computer** button to toggle between the Computer1 and Computer2 ports, press the **Video** button to toggle between the Video and S-Video ports, and press the **USB** button to toggle between the USB ports. (The PowerLite 84+ only has one USB port.)

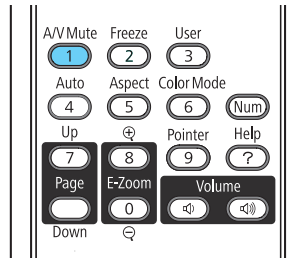
Or press the **LAN** button to project through your network. (The LAN button does not work with the PowerLite 84+ or 824+.)

After you select a source, the screen goes dark for a moment before the image appears.

Turning Off the Picture and Sound

You can use the **A/V Mute** button on the remote control to turn off the image and sound. This does the same thing as the A/V Mute slide (shown on page 23) and is useful if you want to temporarily redirect your audience's attention.

- To turn off the picture and sound, press the **A/V Mute** button. The screen turns black.
- To turn the image and sound back on, press the button again.

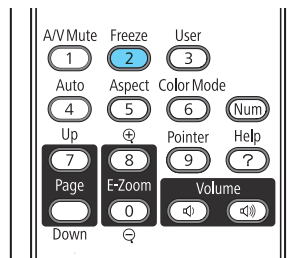


You can have the screen turn blue when you press the **A/V Mute** button. You can also have an image, such as a company logo, display on the screen (see page 114).

Stopping Action

You can use the remote control to stop the action in your video or computer image.

- To stop the action and keep the current image on the screen, press the **Freeze** button. The sound continues.
- To restart it, press the **Freeze** button again.



note





This function pauses the image, but not the sound. Also, because the source continues to transmit signals, you won't resume the action from the point you stopped it.

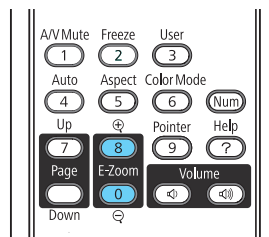
Zooming Part of Your Image

You can zoom in on a portion of the image using the E-Zoom buttons on the remote control.



1. Press the E-Zoom  button on the remote control.

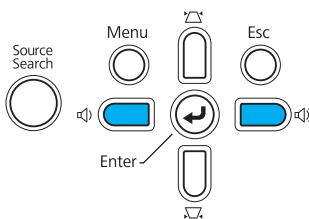
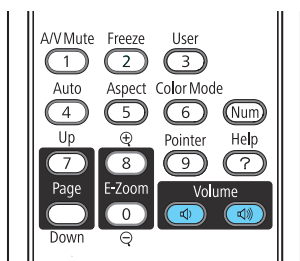
You see a crosshair indicating the center of the zoom-in area.

2. Use the  pointer buttons to position the crosshair.
3. Continue pressing the E-Zoom  button to enlarge the selected area up to 4× magnification.
4. While the image is enlarged, you can:
 - Use the  pointer buttons to move around the screen.
 - Press the E-Zoom  button to zoom out.
5. When done, press the ESC button to return the image to its original size.



Controlling the Volume

To change the volume, press the  or  button on the remote control or projector.



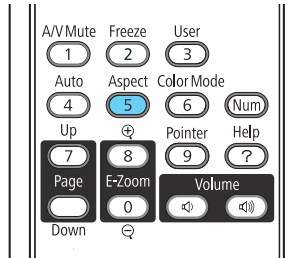
note

To temporarily shut off the sound and picture, press the A/V Mute button or close the A/V Mute slide.

You can also adjust the volume using the projector's menu system. See page 108.

Adjusting the Aspect Ratio

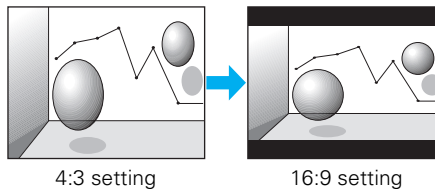
You can use the **Aspect** button on the remote control to adjust how an image fits into the display area. Each time you press the button, the projector changes to the next setting.



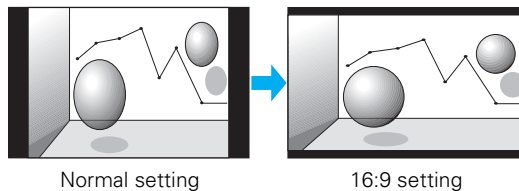
When Connected to Video Equipment

If you're projecting from video equipment such as a DVD player, set the projector's **Aspect** setting to match that of the player. For example, if the video player is set to output images at a 16:9 aspect ratio, set the projector's **Aspect** setting to **16:9** so they match. If the player outputs images at a 4:3 aspect ratio, select **4:3** (PowerLite 84+/85+/824+/825+) or **Normal** (PowerLite 826W+).

PowerLite 84+/85+/824+/825+



PowerLite 826W+



Note that the projector's native aspect ratio is narrower than 16:9. Therefore, widescreen movies and HDTV broadcasts will display with black bars at the top and bottom when 16:9 is selected as the **Aspect** setting. For the PowerLite 826W+, you can select **Full** to stretch the image vertically to fill the whole projection area.

When Connected to a Computer

For computer images, **Normal** is usually the best setting to select. This displays the image at the largest possible size without stretching it. For computers with wide-panel WXGA displays, the PowerLite 826W+ displays the image at WXGA resolution, making full use of the display area; likewise, the PowerLite 84+/85+/824+/825+ displays XGA images to their best advantage.

Depending on your computer display and projector model, you may see black bars at the edges. In that case, try selecting **16:9**. The PowerLite 826W+ also lets you select:

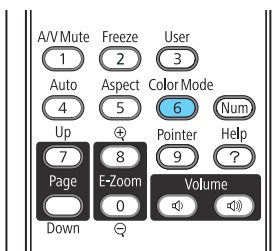
- **Full** to stretch the image to fill the whole projection area
- **Zoom** to fit the image in one dimension only, with the other dimension cut off
- **Native** to display the image without stretching or scaling it

If the resolution of the image is the same as the projector's, changing the **Aspect** setting has no effect. Also, if you're projecting through your computer's USB port, you can't change the projector's aspect ratio; instead, change your computer's resolution to match that of the projector.

note

If part of the image remains cut off, check the projector's Resolution setting (see page 106). Select Normal or Wide, depending on the size of your computer's display panel.

Adjusting the Color Mode



You can use the **Color Mode** button on the remote control to adjust the color, brightness, and other aspects of your image. This lets you quickly adjust the image for various uses.

Press the button repeatedly to select from the following settings:

Dynamic: For increased brightness and contrast when playing video games or watching TV in a bright room. If you notice video delays during high-speed gaming, turn off the **Progressive** setting (see page 107).

Presentation: For computer presentations in a bright room with color graphics.

Whiteboard: For computer presentations in a bright room with black-and-white text and graphics.

Theatre: For watching movies in a dark room.

Photo: For vivid, high-contrast still images in a bright room.

Sports: For vivid TV images projected in a bright room (component video, S-Video, or composite video only).

sRGB: For matching the color palette of standard sRGB computer displays

Blackboard: For projecting accurate colors on a green chalkboard (adjusts the white point).

Displaying Patterns

You can display a test pattern or one of the following 4 patterns for use on a whiteboard or chalkboard:



Pattern 1



Pattern 2



Pattern 3



Pattern 4

1. Press the **Menu** button on the remote control, then select the **Settings** menu and press **Enter**.
2. Highlight **Pattern** and press **Enter**.
3. Highlight **Pattern Type** and select one of the patterns shown above, or choose **Test Pattern**. If you want to create your own pattern, choose **User Pattern**. See page 40 for more information.
4. Press **Enter** to select the pattern you want, then press **Esc**.
5. Choose **Pattern Display** to display the pattern.
6. Press **Esc** when you're finished displaying the pattern.

Assigning a Pattern to the User Button

You can assign any of the available patterns to the **User** button on the remote control, and then display it by simply pressing the **User** button.

1. In the **Settings** menu, select the **Pattern Type** as described above.
2. Highlight **User Button** and press **Enter**.
3. Highlight **Pattern Display** and press **Enter**.
4. Press **Menu** to exit.

Creating Your Own Pattern

You can transfer any image from your computer or video source to the projector and then use it as a pattern. If you assign it to the **User** button as described on page 39, you can display it any time you want by simply pressing the **User** button on the remote control.

Start by displaying the image you want to use from a computer or other source. Then follow these steps to capture the image and transfer it to the projector:

note

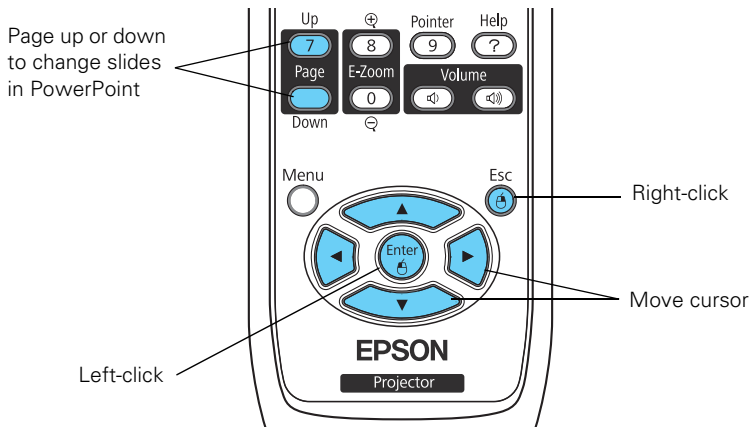
When you choose an image for the user pattern, it erases any previously used image.



1. In the Settings menu, highlight **Pattern** and press **Enter**.
2. Select **User Pattern** and press **Enter**.
3. When you see a message asking if you want to use the current image as the pattern, select **Yes** and press **Enter**.
4. Press **Enter** again.
5. When you see a confirmation message, select **Yes** and press **Enter**. Saving the image may take a few moments. Do not use your projector, remote control, or video source while the logo is being saved.
6. When you see a message that saving is complete, press **Menu** to exit.

Operating Your Computer with the Remote Control

If you connect a computer to the projector with a USB cable, as described on page 51, then select **Wireless Mouse** for the USB Type B setting in the Extended menu (see page 118), you can use the remote control in place of your computer's mouse. This gives you more flexibility when delivering slideshow-style presentations, since you won't have to stand next to the computer to change slides.

- Use the **Page Up** and **Down** buttons to move through a slideshow.



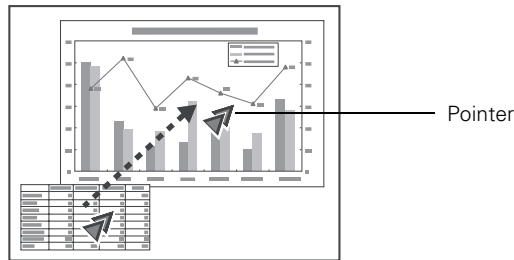
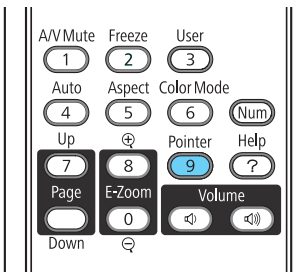
- Use the  pointer buttons to move the cursor on the screen.
- Press the **Enter** button once to left-click, or press it twice to double-click. Press the **Esc** button to right-click.
- To drag-and-drop, hold down the **Enter** button. Then use the  pointer buttons to drag the object. When it's where you want it, release the **Enter** button.

Highlighting Your Presentation


You can display a pointer to call out important information on the screen. If you want to customize the pointer tool, you can choose from three alternative shapes.

Using the Pointer Tool

1. To activate the pointer tool, press the **Pointer** button on the remote control. A pointer appears on the screen.



If you prefer to use a different style of pointer, see the instructions in the next section.

2. Use the  pointer buttons on the remote control to position the pointer on the screen.
3. When you're done using the pointer, press the **Pointer** or **Esc** button to clear the screen.

Customizing the Pointer Tool

You can change the appearance of the pointer by choosing from three alternative shapes.



1. Press the **Menu** button on the remote control, highlight the **Settings** menu, highlight **Pointer Shape**, and press **Enter**. You can select one of the pointer shapes shown at the left.
2. Select the shape you want and press **Enter**.
3. Highlight **Return** and press **Enter**.
4. Press **Menu** to exit from the menu system.

Presenting a Slideshow

You can use your projector's Slideshow feature whenever you connect a USB device that contains image files having a .JPG filename extension (not available on the PowerLite 84+). This lets you quickly and easily display individual images, or start a slideshow of all the images in a folder. You can control your slideshow using the projector remote control.

For an instant PowerPoint presentation, convert your PowerPoint slides to individual .JPG files (save as *.jpg) and store them in a folder. Copy that folder to a USB flash memory drive (thumb drive), or other USB device. Then connect the device to the projector and begin your presentation.

You can switch the display from the device displaying the slideshow to another source using the **Source Search** button or one of the specific source buttons on the remote control. To return to the Slideshow source, press **Source Search** and select **USB**, or simply press the **USB** button.

note

You can project .JPG files in resolutions up to 4608 × 3072.

If a .JPG file is highly compressed, your projector may not be able to display it correctly. The projector can't display progressive or CMYK .JPG files.

You cannot project movie files using the Slideshow feature.

Your projector may not be able to display files from a USB storage device that uses security functions.

Starting a Slideshow

1. Connect a USB device to the projector's USB TypeA port (see page 58).
2. If you are connected to another image source, press the **USB** button on the remote control to go to the Slideshow program.

If you are not connected to another image source, the Slideshow program appears automatically.



note

To rotate a displayed image, press the **▲** or **▼** button on the remote control until it is displayed correctly.

note

To display a slideshow from a folder that is not open, highlight the folder and press the **Esc** button on the remote control. Then select **Slideshow** from the menu that appears and press **Enter**.

To begin a slideshow from a particular image, use the arrow buttons to highlight that image, press **Enter**, then press **Enter** again.

If necessary, press the arrow buttons on the remote control to highlight the device you want to present from, then press the **Enter** button.

3. If you need to select a subfolder on your device, press the arrow buttons to highlight the folder and press **Enter**.
4. To display an individual image, press the arrow buttons to highlight it and press **Enter**. To display additional image files, press the **◀** or **▶** arrow button.
5. To display a slideshow of all the images in the current folder, use the arrow buttons to highlight **Slideshow** on the bottom of the Slideshow screen and press **Enter**. The images display sequentially one time through. At the end, you see the folder display again.

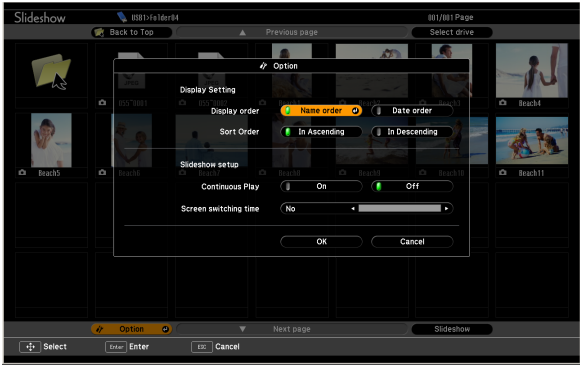
Select the following as necessary to control your display or slideshow:

- To move back up a folder level, highlight **Back to Top** at the top of the Slideshow screen and press **Enter**.
- To select a different device, highlight **Select drive** in the upper right corner of the screen, press **Enter**, and select the device.
- If all the images in a folder do not fit on the Slideshow screen, highlight **Next page** at the bottom of the screen and press **Enter** to display the next screen full of images. Select **Previous page** at the top of the screen to select the previous screen.
- To exit the slideshow, press **Esc**, select **Exit**, and press **Enter**.

Selecting Slideshow Display Options

To select slideshow options for images in the current folder, follow these steps:

1. Highlight **Option** at the bottom left corner of the slideshow screen and press **Enter**. You see this screen:



2. Highlight the options you want to use, and press **Enter**.

| Option | Available settings |
|-----------------------|---|
| Display order | Name order displays files in name order Date order displays files in date order |
| Sort order | In Ascending sorts the files first to last In Descending sorts the files last to first |
| Continuous play | On displays a slideshow continuously Off displays a slideshow one time through |
| Screen switching time | No does not switch file display automatically 1Sec. to 60Sec. displays files for the selected time and switches them automatically |

3. When you are finished, highlight **OK** at the bottom of the screen and press **Enter**. (Highlight **Cancel** and press **Enter** to cancel your changes.)

3

Connecting to Computers, USB Devices, and Other Equipment

This chapter tells you how to connect the projector to a notebook or desktop computer, video equipment (such as a VCR, DVD player, or video camera), and/or a microphone. With the PowerLite 85+/824+/825+/826W+, you can also connect the projector to a USB storage device, digital camera, or document camera. With the PowerLite 84+/85+/825+/826W+, you can also connect the projector to external speakers.

Follow the instructions in this chapter on:

- Connecting to a computer
- Connecting video equipment
- Connecting to a document camera, digital camera, or other device
- Playing sound through the projector

Connecting to a Computer


note

Don't try to force a connector to fit a port with a different shape or number of pins. You may damage the port or connector.

The illustrations in this chapter show the PowerLite 85+/825+/826W+. If you are using the PowerLite 84+/824+, the interfaces are slightly different, but the procedures are the same.

You can connect the projector to any computer that has a standard VGA output (monitor) port, including desktop models, PC notebook computers, MacBook®, PowerBook®, and iBook® systems, and hand-held devices.

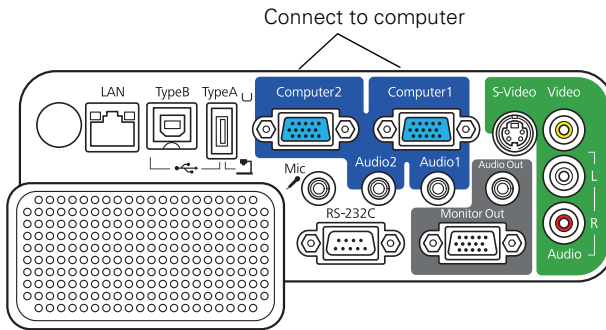
You can also connect to the USB port on a Windows® or Macintosh® computer.

- To connect to your computer's VGA port, see page 49.
- To connect using your computer's  USB port, see page 50.
- To control your presentation using the remote control as a "wireless mouse," see page 51.

Connecting to the VGA Port

You can connect to your computer using the VGA computer cable that came with the projector (the monitor port on your computer must be a mini D-sub 15-pin port).

1. Connect one end of the VGA computer cable to the projector's blue **Computer1** or **Computer2** port, and the other end to your computer's monitor port.



note

Make sure the Input Signal setting in the Signal menu is set to Auto or RGB (see page 107).

2. You can connect an optional stereo mini-jack audio cable to play sound through the projector (see page 59), or connect the USB cable to use the remote control as a mouse (see page 51).
3. When you've finished making any connections, see page 23 for instructions on turning on the projector and adjusting the image.


Once the projector is turned on, select the image source: press the **Source Search** button on the remote control or the projector's control panel.

note


The USB display feature is not available for Windows 98 or Windows Me. To use this feature, your computer must allow you to install software from the projector. You may need Administrator rights.

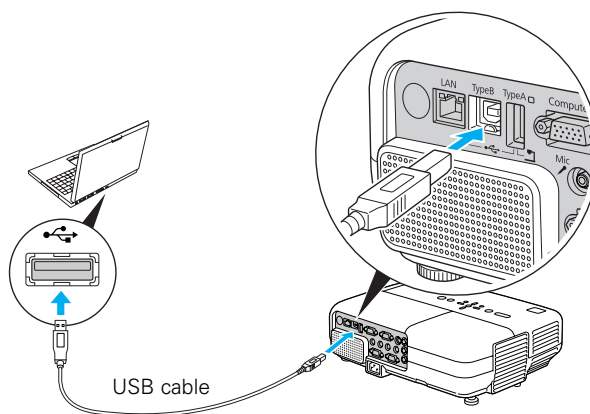
When you are finished projecting via USB with Mac OS X, click the USB Display dock icon, select Disconnect (not Exit), and then remove the USB cable. With Windows, you can simply remove the USB cable (you don't need to use the Safely Remove Hardware feature).

Connecting to the USB Port

You can connect a Windows 7, Windows Vista®, Windows XP, Windows 2000 (SP4), or Macintosh computer (with Mac OS® X 10.5.1-10.6) to the projector's **TypeB** (square)  USB port and project your computer's display.

The first time you connect your computer to the projector's USB port, software from the projector installs on your computer.

1. Follow the instructions beginning on page 23 to turn on the projector and adjust the image.
2. Make sure the **USB Type B** setting in the projector's Extended menu is set to **USB Display** (see page 118).
3. Turn on your computer.
4. Locate the USB cable that came with your projector.
5. Connect the square end of the cable to the projector's **TypeB** (square)  USB port.



6. Connect the flat end of the cable to any available USB port on your notebook or desktop computer.

7. Do one of the following:

Windows: Messages appear as the projector is recognized and the software installation begins. Follow the instructions on your computer screen to install the Epson USB Display software. If you see a “Digital Signature Warning,” select **Continue**. You will only need to install the software the first time you connect.

Mac OS X: Double-click the **USB Display Installer** icon that appears on your computer screen (if the icon does not automatically appear, double-click **EPSON_PJ_UD** and then **USB Display Installer**). Follow the instructions on your computer screen to install the Epson USB Display Software. You will only need to install the software the first time you connect.

8. After the software has installed, press the **USB** button on the remote control. **USB Display** appears briefly in the upper right corner of the image and you see your computer’s desktop displayed by the projector.

note


Next time you connect via USB, you won’t have to wait for the software to install.

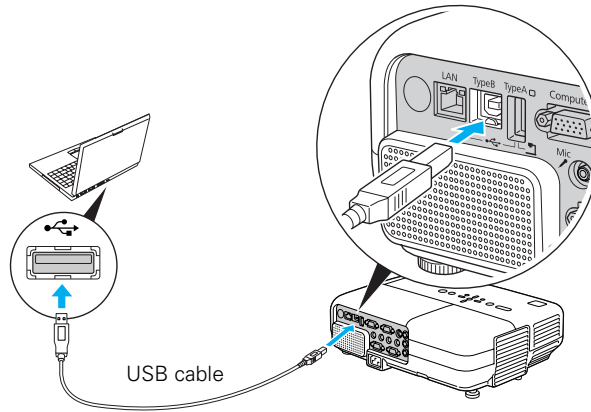
Connecting the USB Cable for Remote Mouse Control

If you’ve connected a computer as described in this chapter using the **Computer1** or **Computer2** port, you can use the projector’s remote control as a wireless mouse. This lets you control your computer and click through slideshow-style presentations, such as PowerPoint®, from up to 20 feet away (see page 41 for more information).

The wireless mouse function is supported on systems with a USB port running Windows or Mac OS.

1. Set the **USB Type B** setting in the projector’s Extended menu to **Wireless Mouse** (see page 118).
2. Locate the USB cable that came with your projector.

3. Connect the square end of the cable to the projector's Type B (square)  USB port.



4. Connect the flat end of the cable to any available USB port on your notebook or desktop computer.
5. Press the **Computer** button on the remote control to select your computer as the source. (The wireless mouse function doesn't work when other sources are selected.)
6. If necessary, configure your computer to work with a USB mouse. See your computer documentation for details.

note

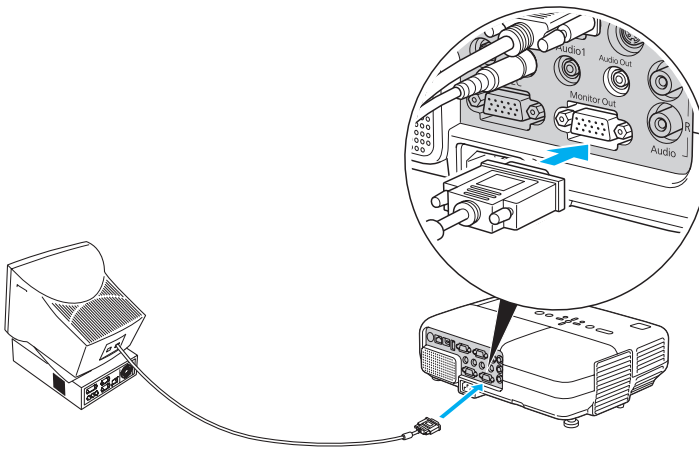
If you're using Mac OS X and you see a Keyboard Setup Assistant window, click Continue and then close the next screen.

Connecting an External Monitor

If you want to see your presentation close-up as well as on the projection screen, you can connect an external monitor to the projector (PowerLite 84+/85+/825+/826W+ only).

This lets you view images on your computer monitor while the projector is in standby mode (plugged in but not turned on). You can also check your presentation or switch between picture sources even if you've pressed the **A/V Mute** button on the remote control to turn off projection on the screen.

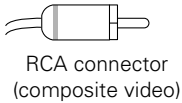
Connect the monitor's cable to the projector's **Monitor Out** port as shown.



note

To use an external monitor, your computer must be connected to the Computer1 port. Additionally, you cannot use an external monitor if your signal is component video.

Connecting to Video Equipment



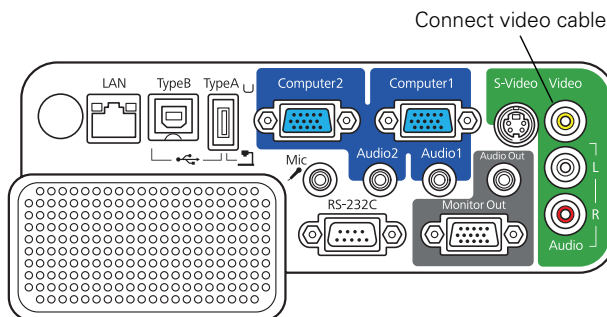
You can connect several video sources to the projector at the same time. Before starting, look at your video equipment to determine its available video output connections:

- If your video player has a yellow RCA-style video output connector, see “Connecting a Composite Video Source” below.
- If your video player has an S-video connector, see “Connecting an S-Video Source” on page 55.
- If your video player has a component video port (three connectors labeled either Y/Cb/Cr or Y/Pb/Pr), see “Connecting a Component Video Source” on page 56.
- If your video player has an RGB video port (either a single connector for a VGA-style monitor cable or three connectors labeled R/G/B), see “Connecting an RGB Video Source” on page 57.

After connecting video cables, you may also want to connect an audio cable to play sound through the projector; see page 59.

Connecting a Composite Video Source

1. Locate an RCA-style video cable (one is usually provided with your video equipment or you can purchase one from an electronics dealer).
2. Connect the cable to the yellow video output connector on your player and the yellow **Video** connector on the projector:

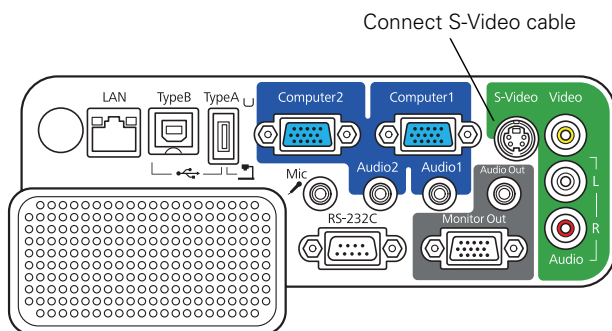


3. If you want to play sound through the projector, see page 59 for instructions on connecting audio cables.
4. If you don't need to make any other connections, see page 22 for instructions on turning on the projector and adjusting the image.

Once the projector is turned on, select the image source: press the **Source Search** button on the remote control or the projector's control panel.

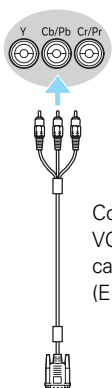
Connecting an S-Video Source

1. Locate an S-Video cable (one is usually provided with your video equipment or you can purchase one from Epson; see page 13).
2. Connect the cable to the S-Video connector on your player and the **S-Video** connector on the projector:



3. If you want to play sound through the projector, see page 59 for instructions on connecting audio cables.
4. If you don't need to make any other connections, see page 22 for instructions on turning on the projector and adjusting the image.

Once the projector is turned on, select the image source: press the **Source Search** button on the remote control or the projector's control panel.

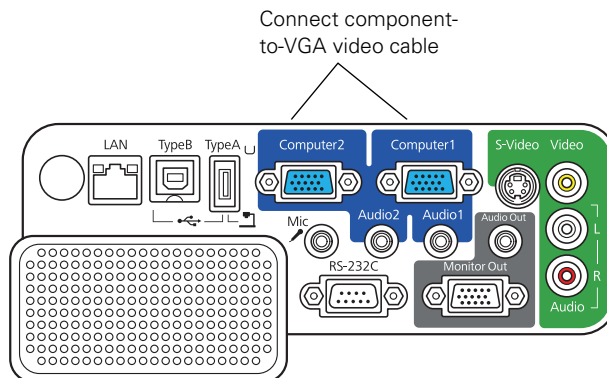


Component-to-VGA video cable (ELPKC19)

Connecting a Component Video Source

You will need a component-to-VGA video cable, or a component video cable and adapter, for this connection. You can order the component-to-VGA video cable (ELPKC19) from Epson; see page 13 for more information.

1. Connect the VGA-end of the cable to the blue **Computer1** or **Computer2** connector on the projector.



2. Insert the three component ends of the component-to-VGA video cable into the color-coded output ports on your video source, usually labelled Y, Pb, Pr or Y, Cb, Cr.
3. If you want to play sound through the projector, see page 59 for instructions on connecting audio cables.
4. If you don't need to make any other connections, see page 22 for instructions on turning on the projector and adjusting the image.

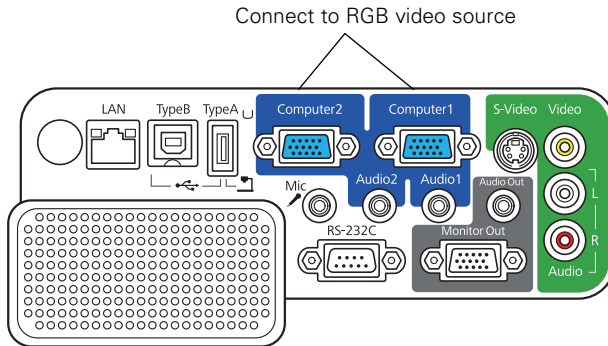
Once the projector is turned on, press the **Source Search** button on the remote control or the projector's control panel and select **Computer1** or **Computer2** as the image source.

note

Make sure the Input Signal setting in the Signal menu is set to Auto or Component Video (see page 107).

Connecting an RGB Video Source

1. Locate the VGA computer cable provided with the projector.
2. Connect the cable to the video port on your player and the Computer1 or Computer 2 port on the projector.



note

Make sure the Input Signal setting in the Signal menu is set to Auto or RGB Video (see page 107).

3. If you want to play sound through the projector, see page 59 for instructions on connecting audio cables.
4. If you don't need to make any other connections, see page 22 for instructions on turning on the projector and adjusting the image.

Once the projector is turned on, press the **Source Search** button on the remote control or the projector's control panel and select **Computer1** or **Computer2** as the image source.



note

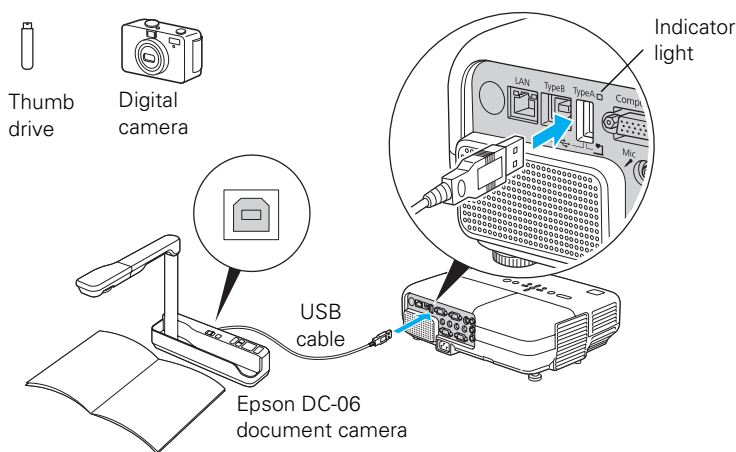
Your projector may not function correctly if you use a longer cable or connect your camera to a USB hub.

If you connect a USB hard drive, make sure you use the AC adapter to power the hard drive.

USB storage devices must be formatted FAT 16/32, and images must have a .jpg file extension and must not exceed 4608×3072 .

You can use the projector's Slideshow feature (see page 43 for details) to present JPEG images.


1. Connect the flat end of the USB cable to the **TypeA**  USB port on the projector, as shown. You can connect a thumb drive directly to the **TypeA**  USB port.



2. Connect the other end of the cable to your digital camera, document camera, or other device.

The indicator light turns orange and then green when a USB device is connected.



3. Press the **USB** button on the remote control or the **Source Search** button on the projector's control panel.

If you connect a digital camera or USB storage device, you can use the  pointer and **Enter** buttons on the remote control to move through your images.

4. When you are finished projecting from the USB device, turn off the device if necessary, then disconnect the USB cable.

Playing Sound Through the Projector

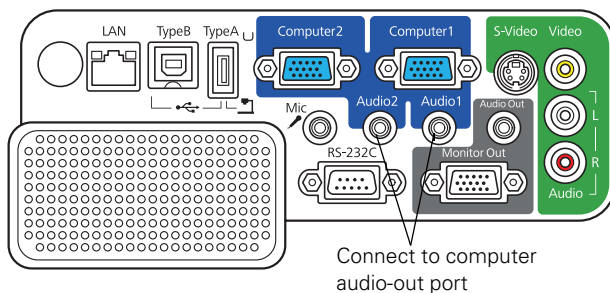
You can play sound through the projector's speaker system. Or, with the PowerLite 84+/85+/825+/826W+, you can attach an external speaker system. You can also connect a microphone and output the sound through the projector.



You can use the  or  **Volume** buttons on the projector or the remote control to adjust the volume.

Playing Computer Audio

For laptop and most desktop computers, use a 3.5 mm stereo mini-jack cable, which you can purchase from a computer or electronics store.

1. Connect one end of the cable to the **Audio1** or **Audio2** jack on the projector.



2. Connect the other end to your laptop's  headphone jack or  audio-out jack, or your computer's speaker or audio-out port.

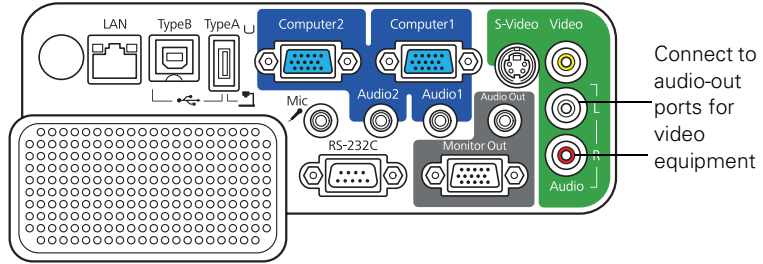
note

If you are using the component-to-VGA video cable, you will need to connect an audio adapter to use the Audio1 or Audio2 jack.

Playing Sound from Video Equipment

For video equipment, use an RCA-style audio cable, which you can purchase from an electronics store.

1. Connect the red and white plugs on one end of the cable to the L and R Audio jacks on the projector.



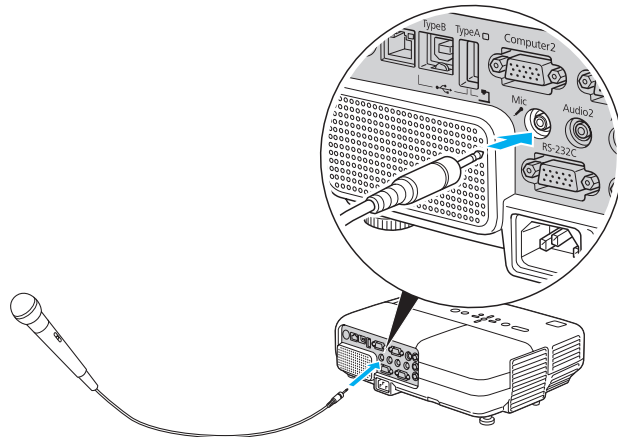
2. Connect the red and white plugs on the other end to the corresponding color-coded audio output jacks on your video source.

Connecting a Microphone

You can connect a dynamic or condenser microphone to the projector's Mic port, using a 3.5 mm mini-jack cable as shown below.

note

If you are using a condenser microphone, make sure the Plug-in Power setting in the Extended menu is set to On. See page 116 for more information.



Use the Mic Input Level option on the Settings menu to adjust the volume. See page 109 for more information.

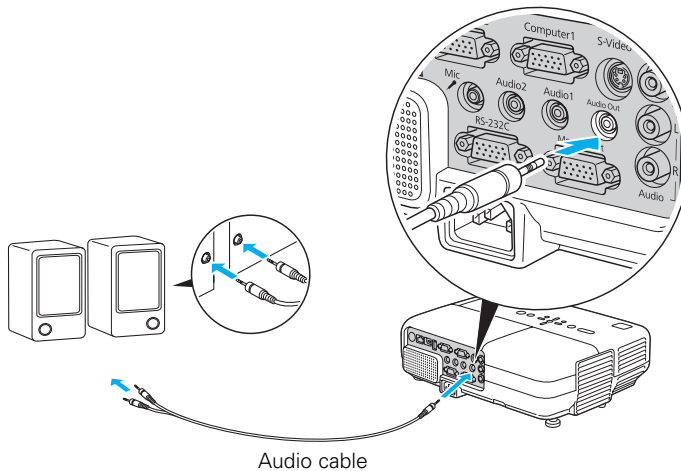
Connecting External Speakers

You can output sound from the projector to external speakers with a built-in amplifier (PowerLite 84+/85+/825+/826W+ only).

1. Locate the appropriate cable to connect your speakers.

Depending on your speakers, you may be able to use a standard audio cable with a stereo mini-jack connector on one end and pin jacks on the other end. For some speakers, you may need a special cable or adapter.

2. Connect the stereo mini-jack end of the audio cable to the **Audio Out** port on the projector.



3. Connect the other end of the cable to your speakers.

The projector's internal speaker system is disabled while sound is output to external speakers.

4

Using the Projector on a Network

If you're using the PowerLite 85+/825+/826W+, you can use Quick Wireless Connection or EasyMP® Network Projection to project images shown on your computer screen—including text, graphics, and video—directly to your audience. See the *EasyMP Network Projection Operation Guide* for information on features and use.

With the PowerLite 84+/85+/825+/826W+, you can use EasyMP Monitor (available for Windows only) to monitor and control your projector through the network. For information on installing and using EasyMP Monitor, see the *EasyMP Monitor Operation Guide*.

You'll find instructions in this chapter on:

- Connecting the projector to a wired LAN
- Installing the optional wireless LAN module
- Using Quick Wireless Connection
- Configuring projector and network settings
- Using wireless security options
- Removing the optional wireless LAN module
- Sending e-mail alerts and monitoring the projector
- Using a browser to control the projector

For wireless connection, make sure you've installed the optional Wireless 802.11a/b/g Module, as described on page 67. Then follow the steps in this chapter to use Quick Wireless Connection (Windows only) or configure your projector and network. See the *EasyMP Network Projection Operation Guide* for instructions on installing the

EasyMP Network Projection software. The *EasyMP Network Projection Operation Guide* also contains instructions on using the software to project over the network.

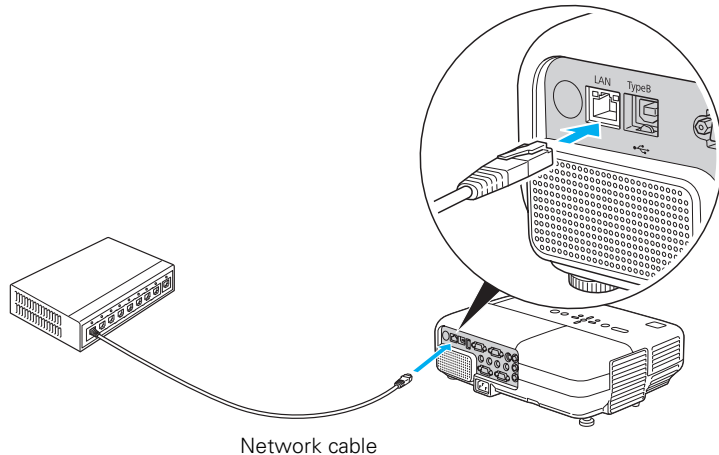
Connecting to a Wired Network


With a shielded, Category-5 Ethernet cable, you can connect the projector to your network and configure it with an IP address.

note

This illustration shows the PowerLite 84+. If you are using the PowerLite 85+/825+/826W+, the interfaces are slightly different, but the procedures are the same.

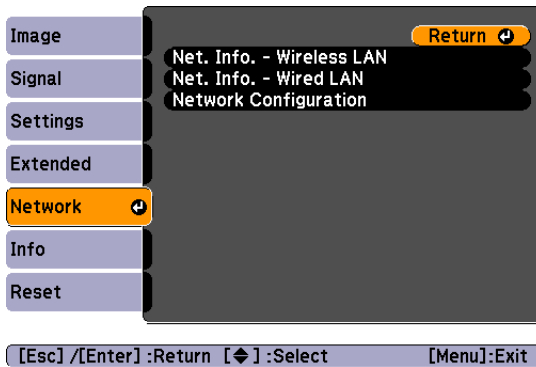
1. Connect the projector to your network using a commercially available 100BaseTX or 10BaseT network cable. Connect the cable to the LAN port on the projector as shown.



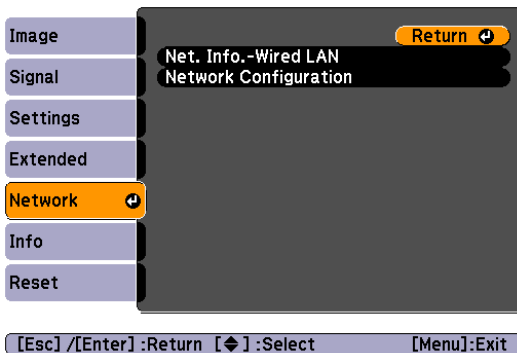
2. Connect the other end to your Ethernet hub or router.
3. Point the remote control at the projector and press the  power button.

4. Press the **Menu** button on the remote control, select the **Network** menu, then press **Enter**.

PowerLite 85+/825+/826W+

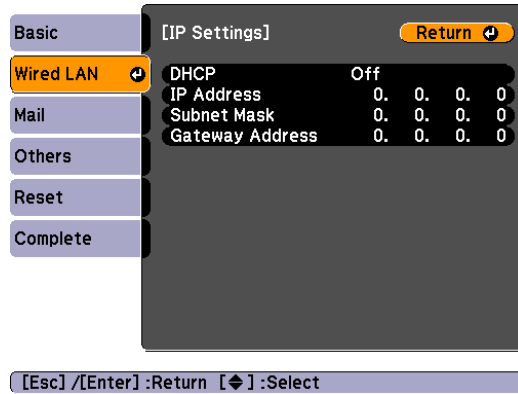


PowerLite 84+




5. Choose **Network Configuration** and press **Enter**.
6. Select the **Wired LAN** menu and press **Enter**.

7. Choose **IP Settings** and press **Enter**. You see a screen like the following:



8. Do one of the following:
 - If your network assigns addresses automatically, turn on the **DHCP** setting.
 - If your network does not assign addresses automatically, turn off **DHCP** and enter the projector's **IP Address**, **Subnet Mask**, and **Gateway Address**, as needed.

To enter numbers, use the  buttons on the remote control to highlight the number you want to input, then press the **Enter** button. When you're finished entering an address in the network menu, highlight **Return**, then press the **Enter** button.

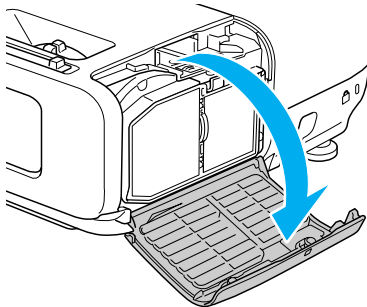
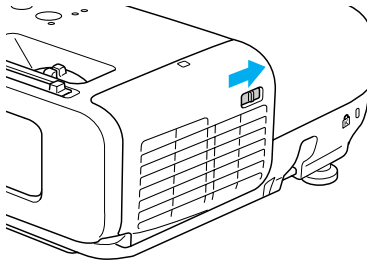
9. To prevent the IP address from appearing on the standby screen, set the **IP Address Display** setting to **Off**.
10. When you're done making these settings, highlight the **Return** button at the top of the screen, then press **Enter**. Choose **Complete** and press **Enter**, then choose **Yes** and press **Enter** to save your settings.

Press **Menu** to exit the menu system.

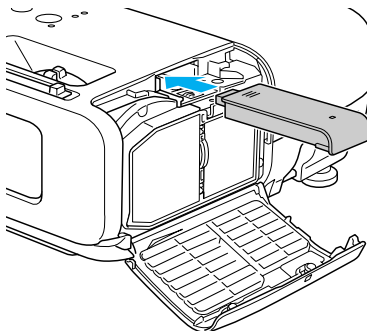
Installing the Optional Wireless 802.11a/b/g Module

Make sure you have the optional Wireless 802.11a/b/g Module (PowerLite 85+/825+/826W+ only). Turn off the projector and disconnect the power cord before you install the module.

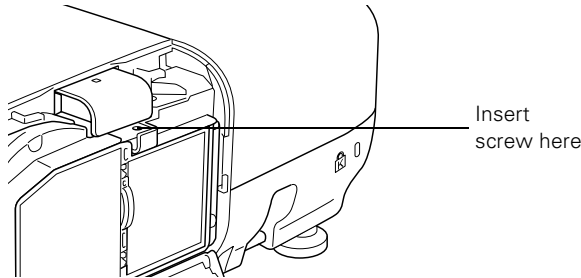
1. Open the air filter cover by sliding the switch and pulling down the cover.



2. Insert the Wireless 802.11a/b/g Module as shown.



3. Fasten the module using the screw that came with it.




4. Close the air filter cover.

If you have the optional USB key, you can use Quick Wireless connection as described in the next section. Or, you can configure your connection manually as described on page 69.

Using Quick Wireless Connection

Using the optional USB key, you can quickly connect the projector to a Windows computer wirelessly without any configuration (PowerLite 85+/825+/826W+ only).

First, make sure you have installed the wireless module as described on page 67 and turned on the projector.

1. Connect the USB key to the projector's  TypeA (flat) USB port.
2. When you see a projected message that the network information update is complete, remove the USB key.
3. Connect the USB key to a USB port on your computer or notebook.

In Windows Vista, if you see the AutoPlay window, select **Run LaunchQW.exe**. When you see the User Account Control screen, click **Allow**.

note

Do not attempt to write to the USB key or use it as a flash memory drive.

4. Follow the instructions on the screen to install the Quick Wireless Connection driver.

If you see a Windows Firewall message, click **Yes** to disable the firewall.

After a few minutes, your computer image will be displayed through the projector. If not, try restarting your computer.

5. When you're done with your presentation, remove the USB key. You may need to restart your computer to reactivate your wireless interface.

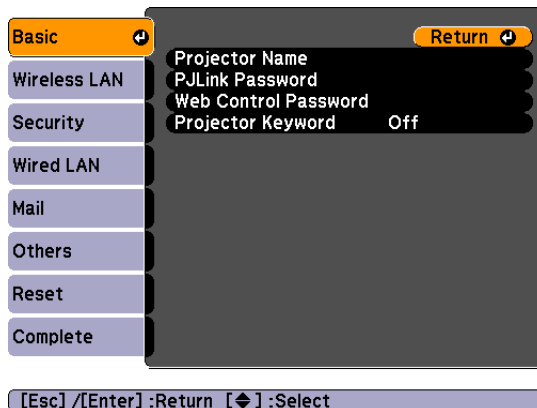
note

The Quick Wireless Connection utility will disable any other wireless sessions and adapter programs. Make sure you leave the USB key in your computer for your entire Quick Wireless Connection session.

Configuring Basic Settings


You can give your projector a unique name, enable a projector keyword, or create a password for controlling the projector over the Web.

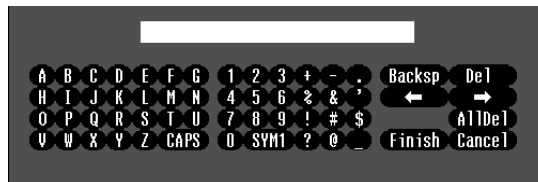
1. Press the **Menu** button, then choose **Network** and press **Enter**.
2. Choose **Network Configuration** and press **Enter**.
3. Choose **Basic** and press **Enter**. You see a screen like the following:



4. Make sure the projector has a unique name, so you can identify it on your network.

If you need to rename it, highlight the **Projector name** text box then press **Enter**.

5. Use the  buttons on the remote control to select individual letters; then press **Enter** to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press **Enter**. To toggle symbol settings or capital letters, highlight the option and press **Enter**. When you're done, highlight **Finish** and press **Enter**.



6. If you want to create a password for using PJLink to control the projector, highlight **PJLink Password**, press **Enter**, and enter a password of up to 8 alphanumeric characters. When you're done, highlight **Finish** and press **Enter**.
7. If you want to create a password for remote access to the projector, highlight **Web Control Password**, press **Enter**, and enter a password of up to 8 alphanumeric characters. When you're done, highlight **Finish** and press **Enter**.
8. If you want to set up a security keyword so that only people who are in the same room as the projector can access it, set the **Projector keyword** option to **On** (PowerLite 85+/825+/826W+ only). Then when you want to connect to the projector, it displays a randomized four-digit number or "keyword" on the screen. If you're using EasyMP Network Projection, you can enter the keyword on your computer to connect (see the *EasyMP Network Projection Operation Guide* for details).
9. When you're done making these settings, highlight the **Return** button at the top of the screen, then press **Enter**. Choose **Complete** and press **Enter**, then choose **Yes** and press **Enter** to save your settings.

Configuring the Connection

You can use EasyMP Network Projection to connect to the projector and send images wirelessly in two modes: Ad Hoc mode or Access Point mode (PowerLite 85+/825+/826W+ only).

- **Ad Hoc mode** (computer-to-computer mode) lets you connect just one computer to the projector at a time; it's easy to set up, and the only equipment you need is a computer with a wireless (802.11g, 802.11b, or 802.11a) network card or adapter, or a Macintosh with an AirPort® or AirPort Extreme card. When you connect with this mode, any connection to other wireless networks is broken; you can connect to the projector only.
- **Access Point mode** (infrastructure mode) lets multiple computers access the projector at the same time and easily trade off control over the projector. To use Access Point mode, you need a wireless (802.11g, 802.11b, or 802.11a) access point or an AirPort Extreme (or AirPort) base station, and one or more computers with wireless network cards or adapters.

Follow the instructions below for the mode you want to use.

Using Ad Hoc Mode

To use Ad Hoc (computer-to-computer) mode, adjust your projector and wireless card or adapter settings as described in this section.

Configuring the Projector

1. Press the **Menu** button, then choose **Network** and press **Enter**.
2. Choose **Network Configuration** and press **Enter**.

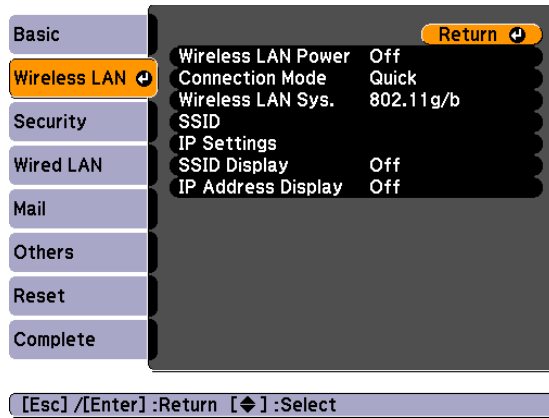
note



Make sure you've installed the EasyMP Network Projection software as described in the EasyMP Network Projection Operation Guide.


To connect to the projector over a wireless network, your computer must be running Windows 7, Vista, XP, or 2000 (SP4). Your Mac must be running Mac OS X 10.3 to 10.6.

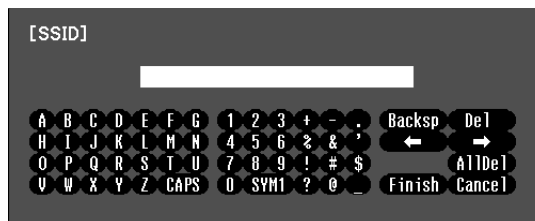
Access Point mode (infrastructure mode) is required to achieve transfer speeds up to 54MB/sec on an 802.11g network. Ad Hoc mode (computer-to-computer mode) limits network connections to 11MB/sec. This is a standard specification of 802.11g networking.

3. Choose **Wireless LAN** and press **Enter**. You see this screen:



4. Make sure **On** is selected for the **Wireless LAN Power** setting.
5. Make sure **Quick** is selected for the **Connection mode**. If not, use the  buttons on the remote control to highlight **Quick**, then press **Enter** to select it.
6. If your network is using **802.11a**, use the  buttons on the remote control to highlight **802.11a**, then press **Enter** to select it.
7. If your network card supports an **SSID** or **ESSID** name (see page 76), highlight the **SSID** text box, press **Enter**, and enter a name:

Use the  buttons to select individual letters; then press **Enter** to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press **Enter**. To toggle symbol settings or capital letters, highlight the option and press **Enter**. When you're done, highlight **Finish** and press **Enter**.



Note that the SSID is case-sensitive (if you enter the name in uppercase on the projector, you must type it the same way on the computer connecting to the projector).

8. If you want to prevent the SSID from being displayed on the standby screen, set the **SSID Display** option to **Off**.
9. To prevent the IP address from appearing on the standby screen, set the **IP Address Display** setting to **Off**.
10. When you're done making these settings, highlight the **Return** button at the top of the screen, then press **Enter**. Choose **Complete** and press **Enter**, then choose **Yes** and press **Enter** to save your settings.

Now you're ready to set up your computer to project wirelessly. Go to "Configuring the Network Settings for Windows" on page 74, or "Setting Up Your Mac for Ad Hoc Mode" on page 76.

Configuring the Network Settings for Windows

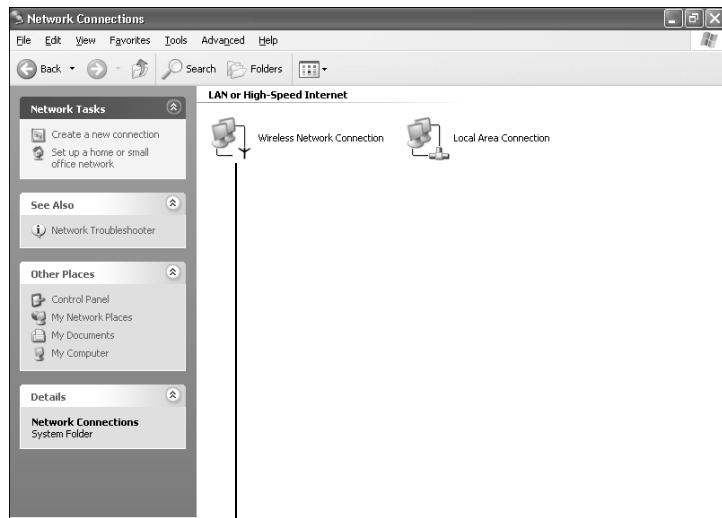
Before connecting to the projector, you need to make sure the settings for your notebook's or PC's network card match the settings you entered for the projector.

note

On some Windows systems, you can right-click My Network Places or Network Neighborhood on the desktop and select Properties.

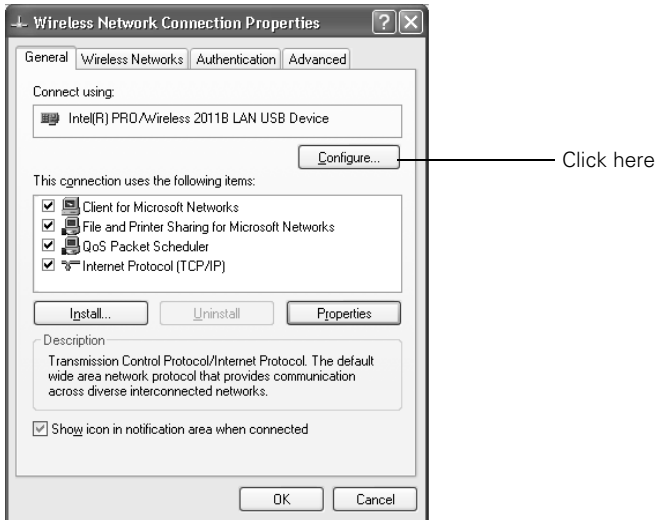
Settings may vary, depending on your wireless network adapter. See the documentation for your adapter for more information.

1. Access your wireless network Properties window. For example, in Windows XP you would click **Start > Control Panel > Network and Internet Connections**. Then click the **Network Connections** icon. You see a screen similar to this:



Right-click and select Properties

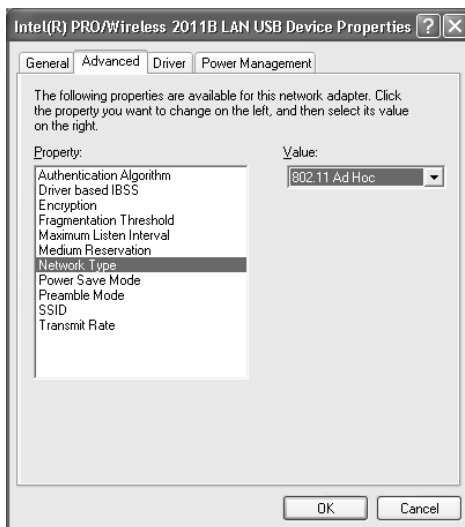
2. Right-click the **Wireless Network Connection** icon and select **Properties**. You see a screen similar to this:



note

When you connect in Ad Hoc mode, your computer is disconnected from any other wireless networks. If you need to remain connected to your wireless network, use Access Point mode, as described on page 78. Also, make sure you reconnect to your original wireless network when you are done using the projector.

3. Click the **Configure** button.
4. Click the **Advanced** tab. You see a screen similar to this:



5. Check your wireless card or adapter device settings. (Depending on the type of card or adapter you're using, some of the settings may be different than those listed here.)
 - Set the Network Type to **802.11 Ad Hoc**.
 - Set the SSID to match the name you assigned to the projector's SSID.
 - Make sure Encryption is **Disabled**.
6. Click the **General** tab and make sure that your wireless card or adapter is enabled.
7. When you're done, click **OK** to close the Properties dialog box.

Now you're ready to connect to the projector. See the *EasyMP Network Projection Operation Guide* for details.

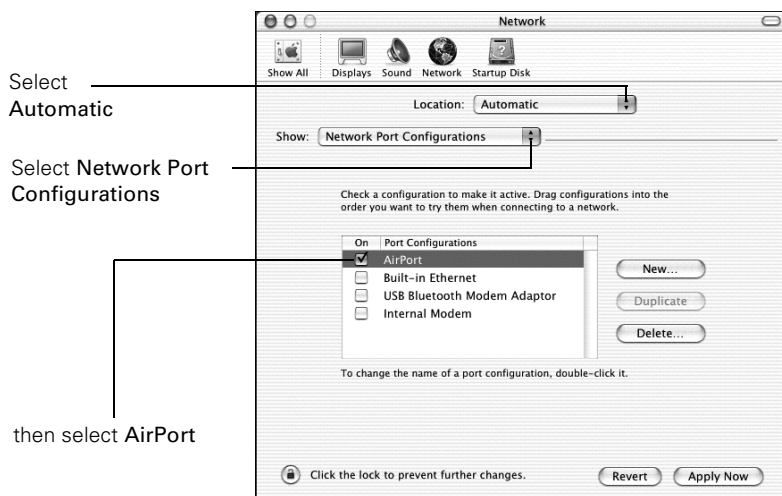
Setting Up Your Mac for Ad Hoc Mode

Your AirPort software is automatically configured to allow your Mac to detect both computer-to-computer (Ad Hoc) and Access Point networks.

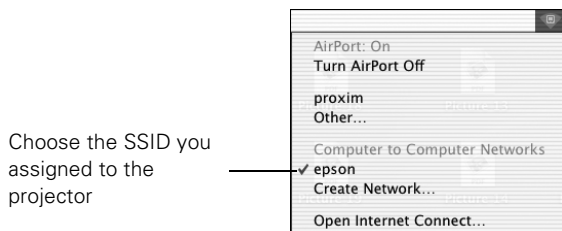
Typically, you only need to select your projector's SSID from the AirPort status menu on the Mac menu bar. If you're having problems detecting the projector, follow these steps:

1. From the Apple pull-down menu, select **System Preferences**.
2. Click the **Network** icon. You see the Network settings window.

3. Make sure Location is set to **Automatic**.



4. Select **Network Port Configurations** in the Show pull-down menu.
5. Under Port Configurations, select **AirPort**.
6. Click **Apply Now**. Then close the window.
7. Click the AirPort icon on the menu bar at the top of the Mac desktop. You see the AirPort status menu:



8. Check to make sure AirPort is turned on.
9. Select your projector's SSID.

note

If you don't need the other network port configurations, disable them by deselecting their checkboxes.

When you connect in Ad Hoc mode, your computer is disconnected from any other wireless networks. If you need to remain connected to your wireless network, use Access Point mode, as described on page 78. Also, make sure you reconnect to your original wireless network when you are done using the projector.

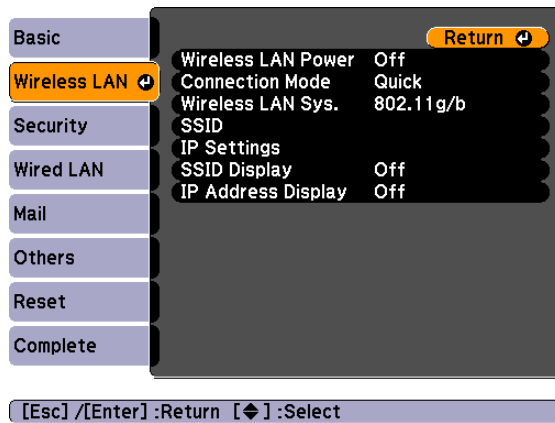
The Network settings window you see may be slightly different depending on your version of Mac OS X, but the procedures are the same.



Using Access Point Mode

To use Access Point (infrastructure) mode, first adjust your projector and wireless access point or AirPort base station settings as described in this section.


Configuring the Projector

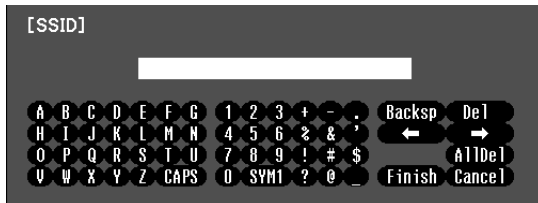
1. Press the **Menu** button, then choose **Network** and press **Enter**.
2. Choose **Network Configuration** and press **Enter**.
3. Choose **Wireless LAN** and press **Enter**. You see this screen:



4. Make sure **On** is selected for the Wireless LAN Power setting.
5. Make sure **Advanced** is selected for the Connection mode. If not, use the  buttons on the remote control to highlight **Advanced**, then press **Enter** to select it.
6. If your network is using 802.11a, use the  buttons on the remote control to highlight **802.11a**, then press **Enter** to select it.
7. To enable your computer to find the projector on the network, you need to enter the SSID name of your access point or the name of your AirPort network in the **SSID** text box. (The name of your AirPort network may be different from that of your AirPort base station; select your base station in the AirPort Admin utility and click **Configure** to check the name of your network.)

Highlight the **SSID** text box, press **Enter**, and enter a name:

Use the  buttons to select individual letters; then press **Enter** to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press **Enter**. To toggle symbol settings or capital letters, highlight the option and press **Enter**. When you're done, highlight **Finish** and press **Enter**.



Note that the SSID is case-sensitive (if you enter the name in uppercase on the projector, you must type it the same way on the computer connecting to the projector).

8. Choose **IP Settings** and press **Enter**. If your access point assigns IP addresses automatically, turn on the **DHCP** setting. Otherwise, turn off **DHCP** and enter the following information:
 - **IP address:** Enter the IP address you want to assign to the projector. It must be formatted like other addresses on the network. The last 3 digits should be unique.
 - **Subnet mask:** For example: 255.255.255.000, but this depends on how your network is set up.
 - **Gateway address:** Enter the IP address that was assigned to the access point or AirPort base station when it was set up.
9. If you want to prevent the SSID from being displayed on the standby screen, set the **SSID Display** option to **Off**.

note

For specific details about your network, please consult your network administrator.

*If you don't know your gateway or access point address, see page 85. If you're using AirPort, start the AirPort Admin utility, select your base station and click **Configure**. Then click the **Network** tab to see your base station's IP address.*

10. To prevent the IP address from appearing on the standby screen, set the **IP Address Display** setting to **Off**.
11. When you're done making these settings, highlight the **Return** button at the top of the screen, then press **Enter**. Choose **Complete** and press **Enter**, then choose **Yes** and press **Enter** to save your settings.

Now you're ready to set up your computer for wireless projecting. Go to "Configuring the Network Settings for Windows" below, or go to "Setting Up Your Mac for Access Point Mode" on page 86. If you want to enable security options for your network, see page 88 to set up the option that your network uses on the projector.

Configuring the Network Settings for Windows

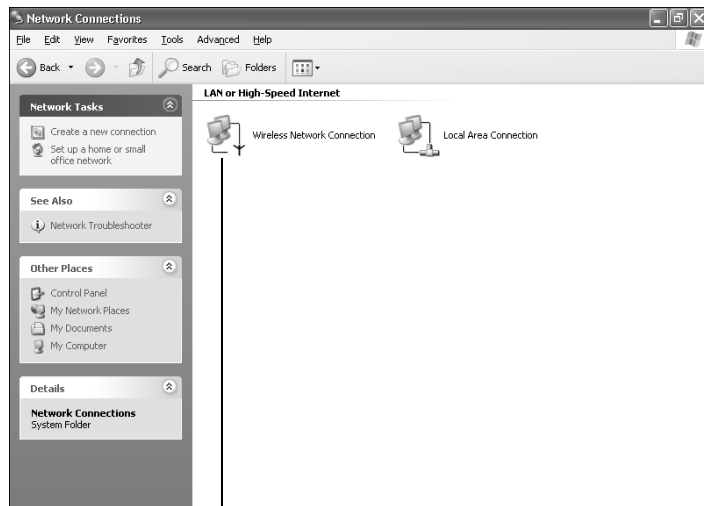
Before connecting to the projector, you need to make sure the settings for your computer's wireless card or adapter match the settings you entered for the projector.

note

*On some Windows systems, you can right-click **My Network Places** or **Network Neighborhood** on the desktop and select **Properties**.*

Settings may vary, depending on your wireless network adapter. See the documentation for your adapter for more information.

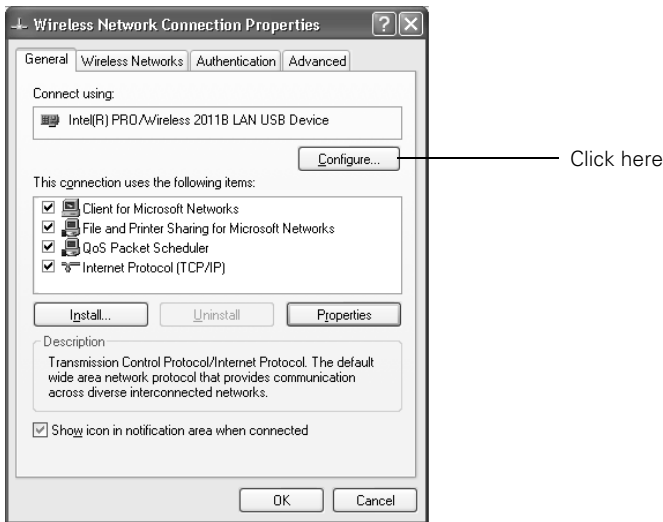
1. Access your wireless network Properties window. For example, in Windows XP you would click **Start > Control Panel > Network and Internet Connections**. Then click the **Network Connections** icon. You see a screen similar to this:



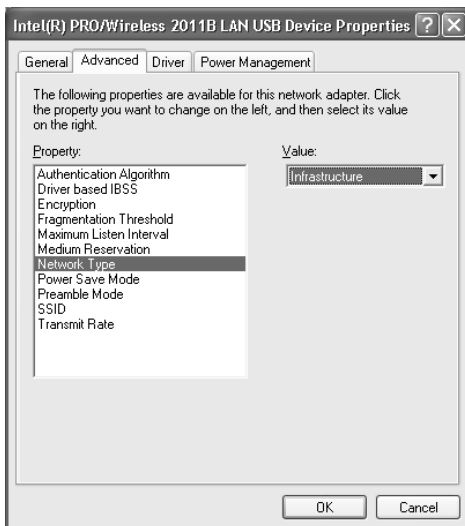
Right-click and select
Properties

2. Right-click the **Wireless Network Connection** icon and select **Properties**.

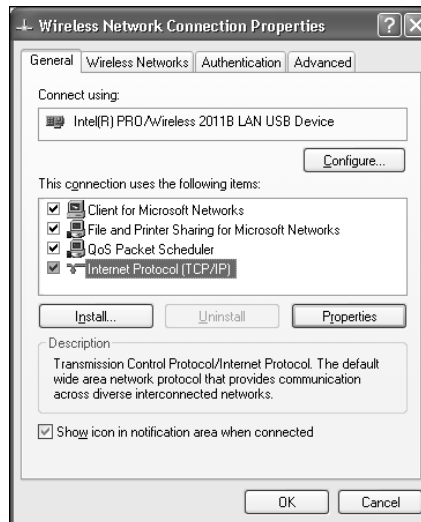
You see a screen similar to this:



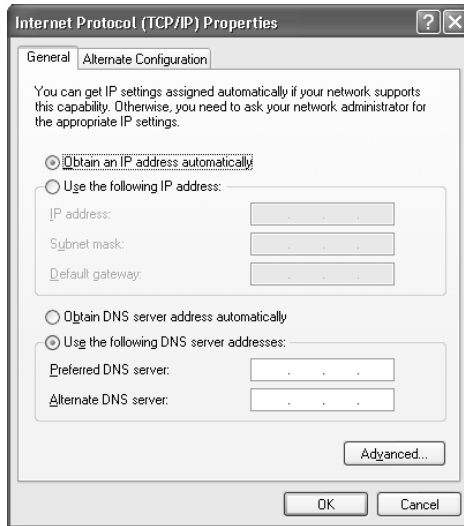
3. Click the **Configure** button.
4. Click the **Advanced** tab. You see a screen like this:



5. Check your wireless card's or adapter's device settings.
(Depending on the type of card or adapter you're using, some of the settings may be different than those listed here.)
 - Set the Network Type to **Infrastructure**.
 - Set the SSID to match the name assigned to the access point (which should also be the projector's SSID).
 - Make sure Encryption is **Disabled** if you have not set up encryption on the projector.
6. Click the **General** tab and make sure that your wireless card or adapter is enabled.
7. When you're done, click **OK** to close the wireless properties dialog box.
8. Right-click the **Wireless Network Connection** icon again and select **Properties**. You see this screen:



9. Select **Internet Protocol** and click the **Properties** button. You see this screen:



10. If your access point uses DHCP, select **Obtain an IP address automatically**. Otherwise select **Use the following IP address** and enter the required information:

- **IP address:** Type in the IP address you want to assign to the computer. It must be formatted like other addresses on the network. The last section must be unique.
- **Subnet mask:** For example: 255.255.255.000, but this depends on how your network is set up.
- **Default gateway:** Enter the IP address that was assigned to the access point when it was set up.
- **Preferred DNS server/Alternate DNS server:** Enter the IP address of the DNS server(s) for your network.

11. When you're done, click **OK**.

note

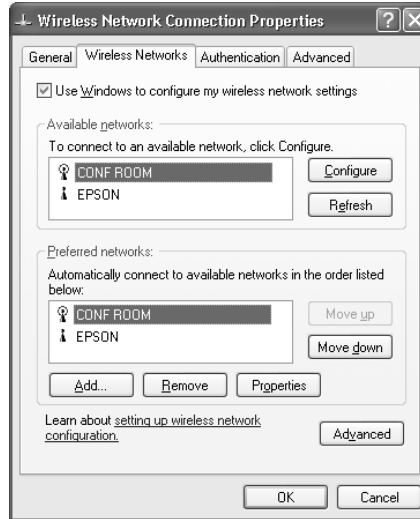
For specific details about your network, please consult your network administrator.

note

If you don't know your gateway or access point address, see page 85.

12. Click the **Wireless Networks** tab.

(If you don't see this tab, you may need to enable your wireless card or adapter by clicking **Configure** to access the device settings; then follow any instructions on the screen to enable the device.) You see a screen like this:



13. Verify that you've enabled your computer's connection to the access point. It should be listed with the small key icon next to it, indicating a connection.

If it's not listed, click **Configure** and type the name of your access point.

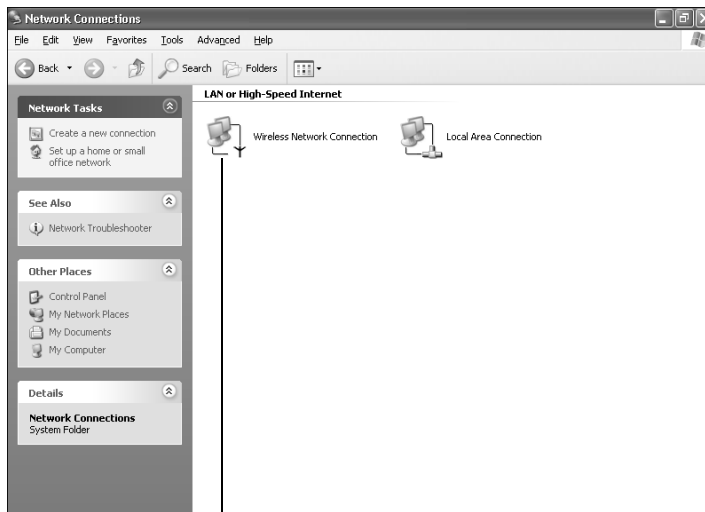
14. When you're done making settings, click **OK** to close the dialog box.

Now you're ready to connect to the projector. See the *EasyMP Network Projection Operation Guide* for details.

Checking the Gateway IP Address on Windows

If you're entering IP addresses manually and need to find out the gateway IP address (the IP address of your access point), make sure the wireless connection to the access point is currently active, as described in the previous section. Then follow these steps:

1. Access your wireless network Properties window. For example, in Windows XP you would click **Start > Control Panel > Network and Internet Connections**. Then click the **Network Connections** icon. You see a screen similar to this:



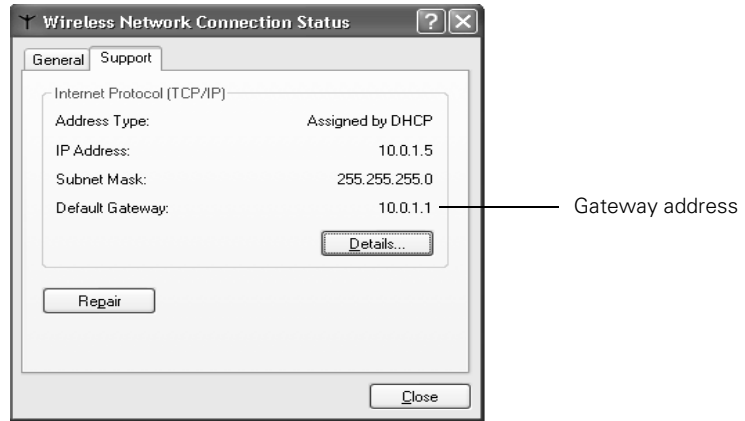
Right-click and select Status

2. Right-click the **Wireless Network Connection** icon and select **Status**.

note

If you cannot identify the gateway address using this Windows utility, use the administrator's utility software that came with your access point.

3. Click the **Support** tab. The gateway's IP address is listed as shown:



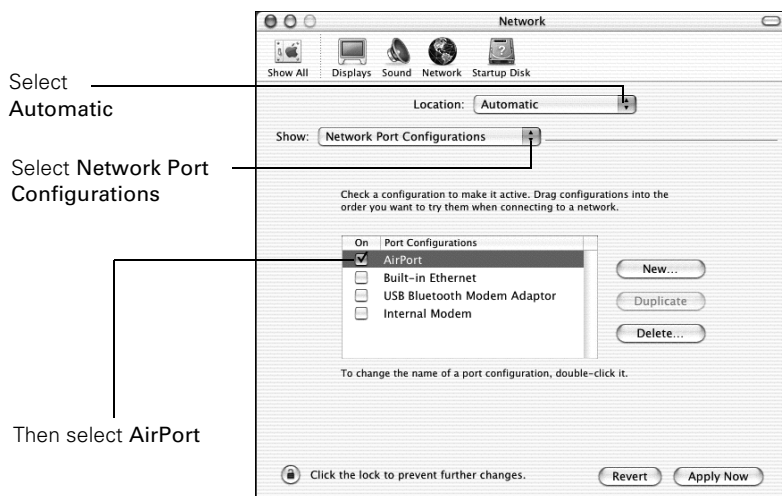
Setting Up Your Mac for Access Point Mode

Your AirPort software is automatically configured to allow your Mac to detect Access Point networks.

Typically, you only need to select your AirPort network name from the AirPort status menu on the Mac menu bar. If you're having problems connecting to the projector, follow these steps:

1. From the Apple pull-down menu, select **System Preferences**.
2. Click the **Network** icon. You see the Network settings window.

3. Make sure Location is set to **Automatic**.



4. Select **Network Port Configurations** in the Show pull-down menu.
5. Under Port Configurations, select **AirPort**.
6. Click **Apply Now**. Then close the window.
7. Start the AirPort Admin utility. Select your base station, then click **Configure**.
8. On the AirPort tab, make sure your AirPort network name matches your projector's SSID. If not, enter the projector's SSID in the AirPort Network text box and click **Update**.
9. If you turned DHCP on in your projector's advanced menu, click the Network tab and make sure the **Distribute IP addresses** checkbox is selected. If you need to select it, click **Update**.

note

If you don't need the other network ports, disable them by deselecting their checkboxes. If more than one network port is enabled, the projector software warns you to turn off AirPort when you first connect the projector. Disregard this message.

Your AirPort network and base station names may be different. To check or change your AirPort network name, start the AirPort Admin utility, select your base station, and click **Configure**. Click **Show All Settings**, then make any changes you want on the AirPort tab.

If you're connecting to your projector in static IP mode, deselect the **Distribute IP addresses** checkbox. Make sure your projector's gateway address is identical to the base station's IP address, and the first three segments of the projector's IP address are identical to the first three segments of the base station's IP address.

The Network settings window you see may be slightly different depending on your version of Mac OS X, but the procedures are the same.

10. Click the AirPort icon on the menu bar at the top of the Macintosh desktop. You see the AirPort status menu:



11. Check to make sure AirPort is turned on.
12. Select the name of your AirPort network.

note

The authentication and firewall features are only effective when the access point for the connection destination supports the same functions.

Using Wireless Security Options

The projector includes WEP and WPA data encryption security options which you can enable for network projection (PowerLite 85+/825+/826W+ only).

Make sure the settings you select match the ones used by your network; follow the directions from your network administrator.

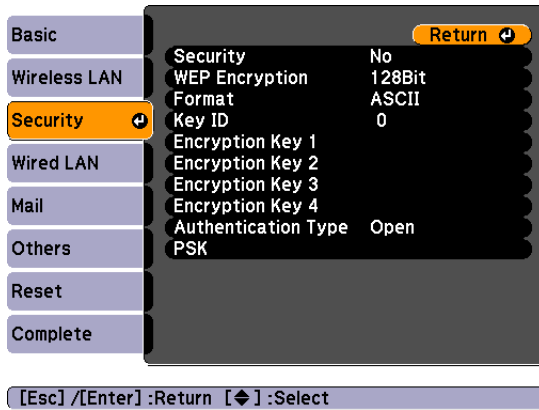
See the following sections to enable security options on your projector:

- “Enabling WEP Encryption” on page 89
- “Enabling WPA Security” on page 91

You also need to enable security settings from EasyMP Network Projection (see page 92).

Enabling WEP Encryption

1. Press **Menu** on the projector remote. Highlight **Network** and then press **Enter**.
2. Choose **Network Configuration** and press **Enter**.
3. Highlight **Security**, then press **Enter**. You see the following screen:




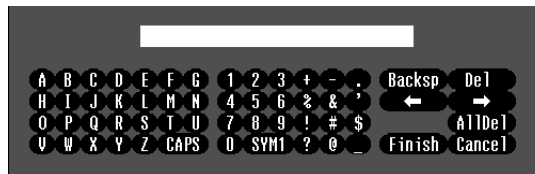
4. Press **Enter** to select **Security**, then select **WEP** and press **Enter**.
5. For the WEP encryption setting, select **128Bit** or **64Bit** and press **Enter**.
6. For **Format**, highlight **ASCII** to enable text input or **HEX** to enable hexadecimal input, then press **Enter**.

note

Text input for WEP encryption varies with different access points; check with your network administrator. Try ASCII first. If that doesn't work, try Text2 and then Text3.

7. If you chose **64Bit**, choose **Encryption key 1, 2, 3, or 4**.

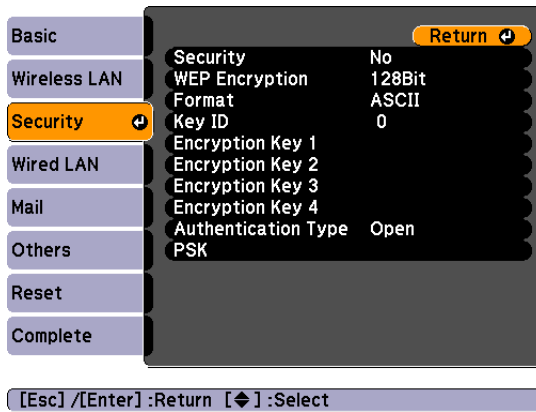
Highlight the **Encryption key** text box that corresponds to the Key ID you selected, then press **Enter**. Use the  buttons to select individual letters; then press **Enter** to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press **Enter**. To toggle symbol settings or capital letters, highlight the option and press **Enter**. When you're done, highlight **Finish** and press **Enter**.



8. Check with your network administrator for directions on entering a key for your network, and follow these general guidelines:
- For 128 bit WEP encryption with hexadecimal input, enter 26 characters, from 0 to 9 and from A to F.
 - For 64 bit WEP encryption with hexadecimal input, enter 10 characters, from 0 to 9 and from A to F.
 - For 128 bit WEP encryption with ASCII or text input, enter 13 alphanumeric characters.
 - For 64 bit WEP encryption with ASCII or text input, enter 5 alphanumeric characters.
9. For Authentication Type, highlight **Open** for open system authentication or **Shared** for shared key authentication.
10. When you're done making these settings, highlight the **Return** button at the top of the screen, then press **Enter**. Choose **Complete** and press **Enter**, then choose **Yes** and press **Enter** to save your settings.

Enabling WPA Security


1. Press **Menu**. Highlight **Network** and then press **Enter**.
2. Choose **Network Configuration** and press **Enter**.
3. Highlight **Security**, then press **Enter**. You see the following screen:

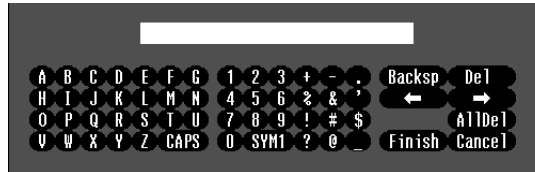


4. Press **Enter** to show the menu, then choose one of the following and press **Enter**.
 - WPA-PSK (TKIP)
 - WPA-PSK (AES)
 - WPA2-PSK (TKIP)
 - WPA2-PSK (AES)
5. Press **Esc** to return to the previous screen.

note

If the password is longer than 32 characters, enter it by accessing the projector from a web browser. This lets you enter up to 63 characters. See page 97 for details.

6. Highlight the **PSK** (pre-shared key) text box and press **Enter**. Use the  buttons to select individual letters; then press **Enter** to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press **Enter**. To toggle symbol settings or capital letters, highlight the option and press **Enter**. When you're done, highlight **Finish** and press **Enter**.



7. When you're done making these settings, highlight the **Return** button at the top of the screen, then press **Enter**. Choose **Complete** and press **Enter**, then choose **Yes** and press **Enter** to save your settings.

Enabling Data Encryption from EasyMP Network Projection

When using the EasyMP Network Projection software, follow these steps to enable data encryption.

1. Click **Set options** on the main screen.
2. Click the **General settings** tab.
3. Select the **Encrypt communications** checkbox.
4. Click **OK**.

For more information, see the *EasyMP Network Projection Operation Guide*.

Using the EasyMP Network Projection Software

Once you've set up your projector and computer for network projection, see the *EasyMP Network Projection Operation Guide* for instructions on the following EasyMP features (PowerLite 85+/825+/826W+ only):

- Starting EasyMP Network Projection
- Projecting over the network (content over IP)
- Multi-screen projection
- Using Presentation mode
- Connecting to a projector on a different subnet

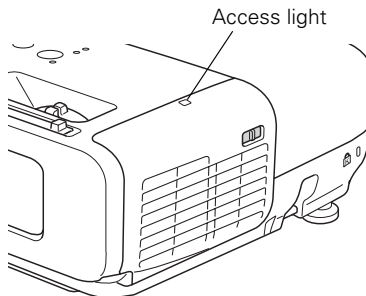
Removing the Wireless 802.11a/b/g Module

Follow these steps to remove the module from your projector (PowerLite 85+/825+/826W+ only).

1. If you're running EasyMP Network Projection, click **Disconnect** on the control bar.



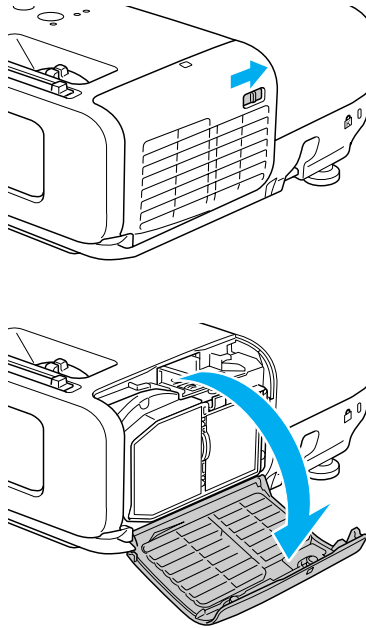
2. Check the access light to make sure it isn't flashing.



caution

Never remove the module while its indicator light is green or when projecting wirelessly. You may damage the module.

3. Turn off the projector and unplug it.
4. Open the air filter cover by sliding the switch and pulling down the cover.



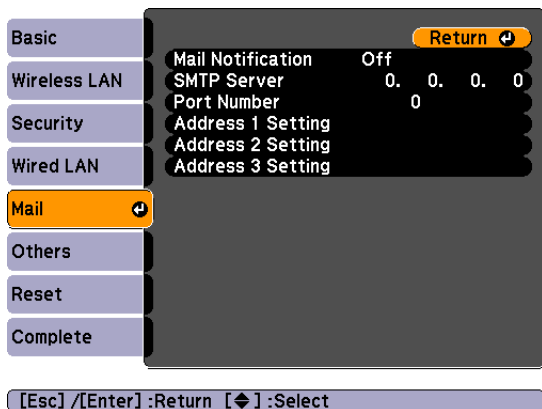
5. Unscrew the module, then pull it out.
6. Close the air filter cover.

Using Projector E-mail Alerts

When this feature is enabled, the projector sends you an e-mail alert if it has any problems.

1. Press the **Menu** button on the remote control, select the **Network** menu, then press **Enter**.
2. Choose **Network Configuration** and press **Enter**.

3. Choose **Mail**, then press **Enter**. You see a screen like the following:



4. For the Mail Notification setting, select **On** to receive email notifications, then press **Enter**.
5. Enter the IP address for the SMTP server for the projector.

You can enter a number from 0 to 255 in each field of the address. However, the following IP addresses cannot be used: 127.x.x.x, 224.0.0.0 to 255.255.255.255 (where x is a number from 0 to 255).

6. Enter the SMTP server's port number. The default value is 25. You can enter a numeric value from 1 to 65535.
7. Choose one of the **Address** fields, then enter the e-mail address and the contents of the message that you will receive when a problem or warning occurs. You can register up to three addresses. You can enter up to 32 alphanumeric characters for the e-mail address.

note

If a critical problem develops with a projector which causes it to suddenly stop working, it may not be possible for the projector to send a message.

If Standby Mode is set to Communication On in the Extended menu, the projector can still be monitored even if the projector is in standby mode (when the power is off).

When the selected problem or warning occurs, an e-mail message is sent to the specified notification addresses. The subject line of the e-mail is **EPSON Projector**.

The e-mail includes the following information:

- Line 1: The name of the projector where the problem has occurred
- Line 2: The IP address of the projector where the problem has occurred
- Line 3: Details of the problem

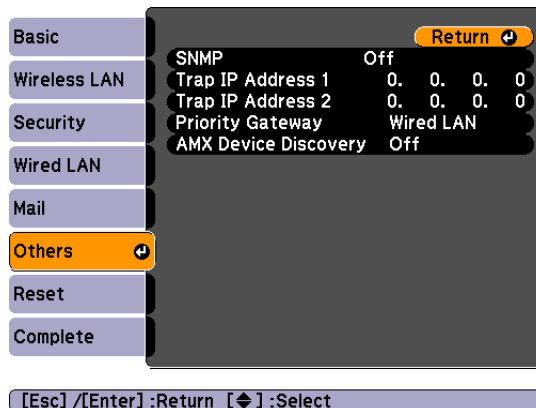
Using SNMP to Monitor the Projector

note

If you're a network administrator, you can use the SNMP option to enter a trap IP address. This lets you receive trap alerts for the projectors you're monitoring.

Network administrators can use SNMP (Simple Network Management Protocol) to monitor projectors.

1. Press the **Menu** button on the remote control, select the **Network** menu, then press **Enter**.
2. Choose **Network Configuration** and press **Enter**.
3. Choose **Others**, then press **Enter**. You see a screen like the following:



4. Turn on the SNMP setting.

5. Enter up to two IP addresses for notification.

You can enter a number from 0 to 255 in each field of the address. However, the following IP addresses cannot be used: 127.x.x.x, 224.0.0.0 to 255.255.255.255 (where x is a number from 0 to 255).

6. For **Priority Gateway**, select **Wired** or **Wireless** (PowerLite 85+/825+/826W+ only).
7. If your network environment uses an AMX controller, select **On** to allow the projector to be detected by AMX Device Discovery.

Using a Browser to Control the Projector

You can use a standard web browser to monitor and control the projector through the network.

1. Make sure that the projector is set up for your network, as described on page 64. (Standby Mode in the Extended menu should be set to **Communication On** to monitor the projector in standby mode.) When using a browser to access the projector, you cannot connect through a proxy server.
2. Open your web browser and enter the IP address of the projector you want to monitor in the browser window.

If you're not sure what the address of the projector is, turn the projector on and select **Net. Info.-Wired LAN** or **Net. Info.-Wireless LAN** (PowerLite 85+/825+/826W+ only) from the Network menu to display the IP address of the projector. Do not enter leading zeroes.

3. Press **Enter**, or, if you set a Web control password in the projector's Network menu, enter your user name and password, then press **Enter**.
4. Select one of the menu options listed on the screen, then change any of the settings as needed. These settings correspond to those found in the projector's menu system.

You cannot change the following settings using a web browser:

- **Pointer Shape, Test Pattern, or User Button** in the Settings menu
- **User's Logo, High Altitude Mode, Lens Cover Timer and Language** in the Extended menu
- **Reset All and Reset Lamp Hours** in the Reset menu

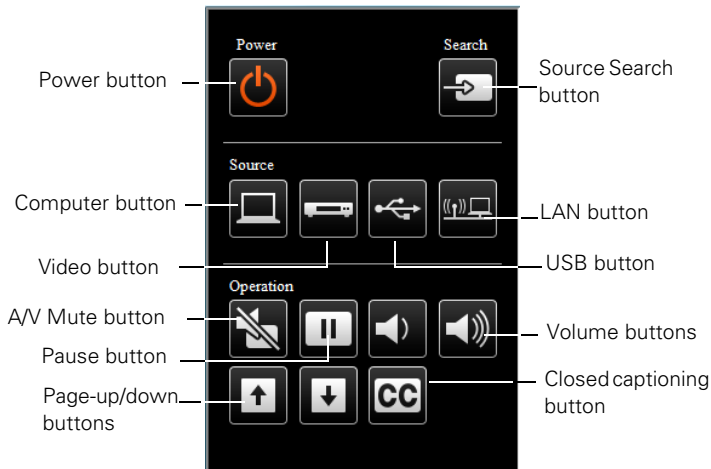
You can only change the following settings using a web browser:

- **SNMP Community Name**
- **EasyMP Monitor password**

Using Web Remote Control

When you access the projector through your browser, you can display a “virtual remote control” on your computer screen. This lets you change sources and perform many of the same functions as you can with the physical remote control.

From the Projector Control menu, select **Web Remote**. You see the following screen:



- The **Power** button turns the projector on and off.
- The **Search** button searches for signal sources (see page 25).
- The **Computer** button selects a computer signal (connected to the **Computer1** or **Computer2** port).
- The **Video** button selects a video signal (connected to the **Video** or **S-Video** port).
- The **LAN** button selects a network signal or wireless signal (using the optional wireless unit). The LAN button does not work with the PowerLite 84+/824+.
- The **USB** button selects USB computer display (see page 50) or a signal from equipment connected to the USB (**TypeA**) port (PowerLite 85+/824+/825+/826W+ only), such as a document camera (see page 58).

- The Pause button stops the image (see page 34).
- A/V Mute button temporarily turns off the picture and sound (see page 34).
- The Page Up/Down buttons control PowerPoint slides (requires USB cable) See page 41.
- The Volume buttons raise or lower the volume.
- The CC (Closed Captioning) button lets you display closed captioning for content that provides it.

5

Fine-Tuning the Projector

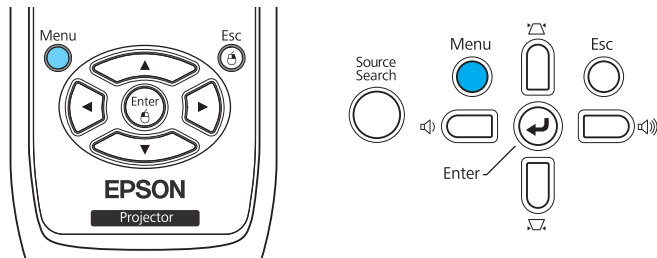
You can use the projector's on-screen menus to adjust the image, sound, and other features. This chapter covers the following information:

- Using the menu system
- Adjusting the image
- Adjusting signal settings
- Customizing projector features
- Using the projector security features
- Customizing power and operation

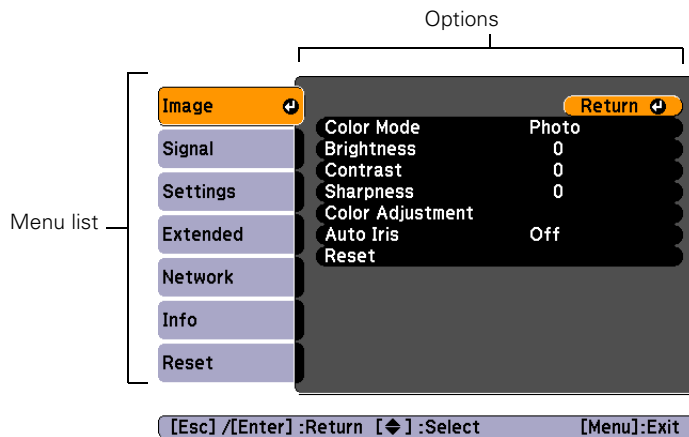
Using the Menu System

You can use the remote control or the projector's control panel to access the menus and change settings. Follow these steps:


1. To display the menu screen, press the **Menu** button on the remote control or on the projector.






You see a menu screen similar to the one below:

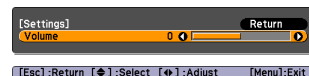


The menus are listed on the left and the options available for the highlighted menu are shown on the right.

2. Use the  pointer buttons on the remote control (or the navigational buttons on the projector) to scroll through the menu list. When you've highlighted the desired menu, press the **Enter** button to select it.

- Once you've selected the menu, use the  pointer buttons to scroll through the list of options. (Some of the options may be grayed out or unavailable, depending on the selected source.)
- After highlighting the option you want to adjust, use the  pointer buttons to change the setting. In some cases, you may have to press the **Enter** button to view a sub-screen for changing the setting.
 - Press the left or right arrow button to adjust a slider bar, then press **Enter**.
 - To select from two or more settings, use the  pointer buttons to highlight the desired setting, and then press **Enter**.
- After changing the settings, press the **Esc** button to save your changes and return to the previous menu (or press it repeatedly to exit the menu system).

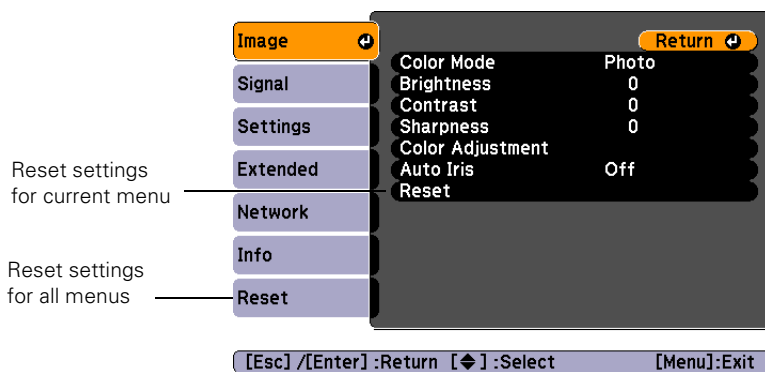
You can also press the **Menu** button to exit.



Restoring the Default Settings

You can use the menu system's Reset options to restore the factory-default settings for all the settings listed in a specific menu, or all the settings in all menus.

To restore the settings in a specific menu, enter the menu whose settings you want to change, select **Reset**, and confirm as needed. (The example below shows how to reset the Image menu.)



note

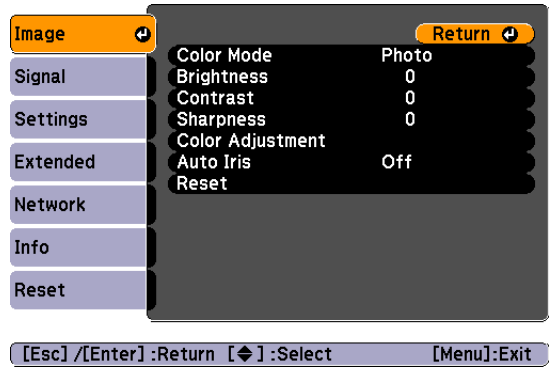
When you select *Reset All* in the *Reset* menu, it does not reset the *Input Signal*, *User's Logo*, *Lamp Hours*, *Language*, or *User Button* settings. Additionally, no items in the *Network* menu are reset.


To restore all the projector settings to their factory-default values, select the **Reset** menu, highlight **Reset All**, and press **Enter**.

Adjusting the Image

You can use the **Image** menu to adjust the brightness, sharpness, color, tint, and contrast.

1. Press the **Menu** button on the projector or remote control, select the **Image** menu, and press **Enter**. You see an **Image** menu screen similar to the one below:



2. Use the  pointer buttons to highlight the desired option, then adjust it as needed:

- **Color Mode**
Lets you quickly adjust the color and brightness for various uses. You can save a different setting for each source. See page 38 for details on each setting.

You can also change the color mode by pressing the **Color Mode** button on the remote control.
- **Brightness**
Lightens or darkens the overall image.
- **Contrast**
Adjusts the difference between light and dark areas.

note

The *Brightness* setting changes the opacity of the projector's LCD panels. You can also use the *Power Consumption* setting to change the lamp's brightness (see page 108).

- **Color Saturation** (component video, composite video, and S-Video signals only)
Adjusts the color depth of the image.
- **Tint** (component video, composite video, and S-Video signals only)
Adjusts the balance of green to magenta in the image (available only for component video or NTSC signals).
- **Sharpness**
Adjusts the sharpness of the image.
- **Color Adjustment**
Adjusts the color values. Select **Abs. Color Temp.** to adjust the overall value from 5000 and 10000 °K. Or, select **Red**, **Green**, **Blue** to adjust the saturation values for each color. (Not available if **sRGB** is selected as the Color Mode setting.)
- **Auto Iris**
Automatically adjusts the brightness according to the nature of the image. Improves the depth and detail of dark scenes. (Only available when **Dynamic** or **Theatre** is selected as the Color Mode setting.)

Adjusting Signal Settings

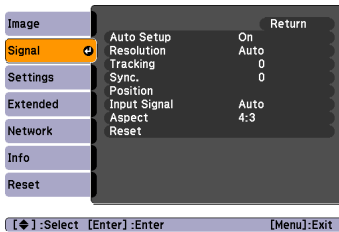
note

You can also use the remote control's **Auto** button to automatically reset the projector's tracking, sync, resolution, and position settings. See page 30 for details.

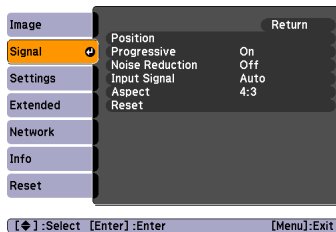
Although the projector normally detects and optimizes the input signal automatically, you can use the Signal menu to make manual adjustments. In addition to changing the position of the projected image, you can correct tracking and sync for computer images, or change the aspect ratio to widescreen format for video images.

1. Press the **Menu** button, select the **Signal** menu, and press **Enter**.

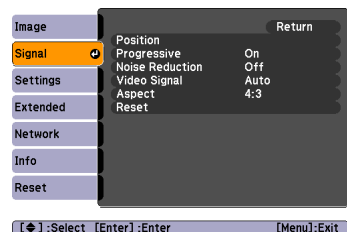
You see a screen similar to one of those below. (The settings will be different depending on the source you are projecting from.)




Computer image



Component video



Composite video/S-Video

2. Use the  pointer buttons to highlight the desired option, then adjust it as needed:

■ Auto Setup

Leave this setting on to automatically optimize the image when **Computer** is selected as the source. Turn it off if you want to save adjustments you have made to the video settings.

■ Resolution

When set to **Auto**, the resolution (size) of a computer image is automatically detected so it can be scaled to fit in the projection area. If the image doesn't display properly after you adjust the aspect ratio setting (see page 36), select **Wide** to project from a computer with a wide-panel display, or **Normal** for a computer with a 4:3 or 5:4 display.

■ Tracking

Adjust this value to eliminate vertical stripes in the image.


■ Sync

Adjust this value if the image appears blurry or flickers.

tip

Before adjusting tracking or sync, fill the screen with an image containing fine detail, such as black text on a white background.

- **Position**

If the image is slightly cut off on one or more sides, it may not be centered exactly. Select this setting and use the  pointer buttons to center it.

- **Progressive**

Turn this setting on for moving images, or select **Off** for still images. If you notice video delays during high-speed gaming, turn this setting off.

- **Noise Reduction**

Smooths out rough images. You may need to experiment to select the best setting for your image. Select **Off** when viewing low-noise image sources, such as DVDs.

- **Input Signal**

If the colors don't look right on the **Auto** setting, select the setting for the type of equipment you've connected to the **Computer1** or **Computer2** port:

RGB: For a computer connection.

Component: For a video player that outputs a component video signal.

- **Video Signal**

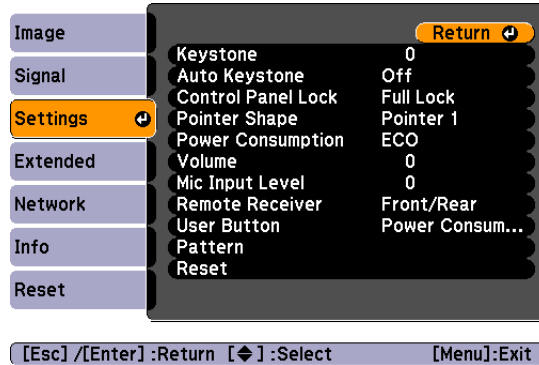
Leave this setting at **Auto** unless you are using a 60-Hz PAL system (then select **PAL60**).

- **Aspect**

Choose an aspect ratio setting that allows the image to fit best in the display area. See page 36 for details.

Customizing Projector Features

You can use the Settings menu to lock the buttons on the projector, adjust audio volume, and customize several other features.



■ Keystone

Squares up the shape of the image after the projector has been tilted upward. If you notice lines or edges looking jagged after adjusting the shape, decrease the Sharpness setting (see page 104).

■ Auto Keystone

Automatically compensates for keystone distortion when the projector is tilted upward. This feature is available only when the projector is set for front projection (it is enabled by default).

■ Control Panel Lock

Lets you disable the buttons on the projector. See page 115 for more information.

■ Pointer Shape

Lets you choose from three alternative pointer shapes. See page 42 for more information.

■ Power Consumption

Lets you select from two levels of brightness. The ECO setting reduces power consumption and noise, and extends the lamp's operating life.

■ Volume

Raises or lowers the volume of the projector's speaker for each type of signal.

note

You can also adjust the volume using the remote control.

- **Mic Input Level**

Adjusts the microphone volume.

- **Remote Receiver**

Deactivates the projector's front and/or back sensors that detect signals from the remote control. Use this setting to prevent use of the remote control or to stop interference from bright fluorescent lights. Restart the projector for this setting to take effect.

- **User Button**

Lets you create a shortcut to one of the following menu items: **Power Consumption**, **Info**, **Progressive**, **Closed Caption**, **Test Pattern**, **Resolution**, **Mic Input Level**, or **Pattern Display**. When you press the **User** button on the remote control, the assigned menu item is displayed.

- **Pattern**

Lets you select one of the following:

Pattern Display to display one of the available patterns.

Pattern Type to select from the following 4 patterns, or select a user-defined pattern:



Pattern 1



Pattern 2



Pattern 3



Pattern 4

User Pattern to capture a customized pattern. See page 40 for more information.

Test Pattern to display a pattern that you can use for adjusting the projector without connecting it. You can adjust the zoom, focus, and keystone correction. To cancel the test pattern, press the **Esc** button on the remote control.

Using the Projector Security Features

To prevent unauthorized use of the projector, you can do the following:

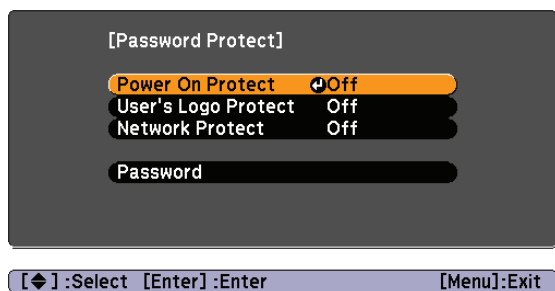
- Assign a password; this can be disabled for a set period if you want to loan the projector to someone.
- Create an identifying user logo that is displayed at startup and/or when the **A/V Mute** button is pressed. Unauthorized users cannot turn it off or change it. This feature is intended to discourage theft and provides a way to identify the projector should it be stolen. See page 114.
- Disable the projector's buttons; this is useful, for example, if you're projecting in a classroom and you want to ensure that no one touches the projector's buttons while you're using the remote control. See page 115.
- Lock the network configuration settings. See page 112.


Enabling Password Protection

To prevent unauthorized use, you can assign the projector a password. If you do, a screen will appear requesting the password whenever the projector is plugged in and turned on. If an incorrect password is entered three times in succession, the projector's operation is locked and the power cord must be disconnected and reinserted to redisplay the password screen. If an incorrect password is entered thirty times in succession, the user must contact Epson to have the projector serviced.

The default setting for the Password Protect function is **Off**. Follow these steps to turn password protection on:

1. Press the **Freeze** button on the remote control for about five seconds. You see this screen:



2. Use the  pointer buttons to select **Power On Protect**, then press **Enter**. Select **On** and press **Enter**.
3. Press **Esc**.
4. Select **Password** and press **Enter**.
5. When you see a message asking if you want to change the password, select **Yes** and press **Enter**.
6. Hold down the **Num** button on the remote control and use the numeric keypad to enter a four digit password. (The default setting is 0000.)
7. When you see a confirmation message, reenter the password. Then press the **Menu** button to exit the screen.

note

It's a good idea to write down your password.

If you leave the projector plugged in, the Password Protect Release screen will not appear. You only need a password if you unplug and reconnect the power cable.

caution

If you lose the remote control, you will not be able to enter the password. Keep the remote control in a safe place at all times.

8. To enable your screen logo, select **User's Logo Protect** and press **Enter**. Select **On** and press **Enter**.

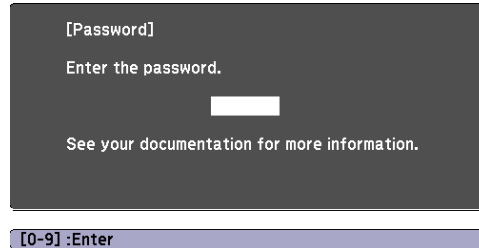
When this feature is on, the logo appears whenever you turn on the projector (if the **Startup Screen** is enabled in the Extended menu; see page 114). It also appears when you press the **A/V Mute** button (if you selected the **Logo** for the **A/V Mute** setting under **Display** in the Extended menu). None of the User's Logo features in the Extended menu can be changed when the User's Logo Protect function is enabled.

9. To enable network setting protection, select **Network Protect** and press **Enter**. Select **On** and press **Enter**.

When this feature is on, none of the network settings on the menu can be changed.

Starting the Projector with a Password

When the password function is enabled, you see this screen when you plug in and turn on the projector:



Hold down the **Num** button on the remote control and use the numeric keypad to enter the four digit password.

The password screen closes, the numeric keypad is automatically deactivated, and projection begins.

If the password is not correct, you see a message prompting you to re-enter the password. If you enter an incorrect password three times in succession, you see the message **The projector's operation will be locked. Request code xxxxx**. Write down the request code. The message displays for approximately 5 minutes, and then the projector switches to standby mode. Once the projector is in standby mode, disconnect the projector's power cord from the electrical outlet, reconnect it, and turn the projector back on.

When you see the Password Protect Release screen again, you can try to enter the correct password.

If you enter an incorrect password 30 times in succession, the projector remains locked and you must contact Epson to have the projector serviced.

If you have forgotten the password, contact Epson with the request code number that appears in the Password Protect Release screen for assistance. See "Where to Get Help" on page 149.

note

Once you capture an image, it automatically replaces the Epson startup screen.

Although you can change the startup screen, you cannot restore the original one.

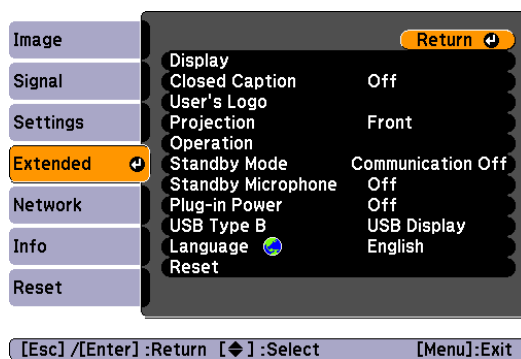
Creating Your Own Startup Screen


You can transfer any image from your computer or video source to the projector and then use it as your startup screen. You can also use it as the screen displayed when the projector is not receiving a signal or when you press the A/V Mute button. The image can be a company logo, slogan, photograph, or any other image you want to use.

Capturing the Image

Start by displaying the image you want to use from either a computer or video source, such as a DVD player. With the PowerLite 85+/824+/825+/826W+, you can also use an image from a USB device. Then follow these steps to capture the image and transfer it to the projector:

1. Press the Menu button on the remote control, highlight the Extended menu, and press Enter.



2. Highlight User's Logo and press Enter.
3. When you see a message asking Choose this image as the User's Logo?, select Yes and press Enter. A selection box displays over the image.
4. Use the  pointer buttons to select the area of the image you want to use. Then press Enter.
5. When you see the message Select this Image?, highlight Yes and press Enter.

6. Use the arrow buttons to select a zoom factor (display size) and press **Enter**.
7. When the message **Save this image as the User's Logo?** appears, select **Yes** and press **Enter**. Saving the logo may take a few moments. Do not use your projector, remote control, or video source while the logo is being saved.
8. When you see the message **Completed**, press **Menu** to exit.

Choosing When to Display the Image

After your image is saved, it is automatically set as the startup screen. You can also set it to display as the screen you see when there's no signal or when you press the **A/V Mute** button (see page 34).

1. Press the **Menu** button, highlight the **Extended** menu, and press **Enter**.
2. Select **Display** and press **Enter**.
3. Highlight **Display Background** (for when there is no signal) or **A/V Mute**, then press **Enter**.
4. Select **Logo** and press **Enter**.
5. When you're finished, press **Menu** to exit.

Disabling the Projector's Buttons

You can lock all the projector's control panel buttons, or all buttons except the **⏻** power button. The projector can still be operated using the remote control.

1. Press the **Menu** button, highlight the **Settings** menu, and press **Enter**.
2. Select **Control Panel Lock** and press the **Enter** button.
3. Select **Full Lock** (to lock all projector buttons) or **Partial Lock** (to lock all buttons except the **⏻** power button) and press **Enter**.
4. Select **Yes** and press **Enter** to confirm the setting.

note

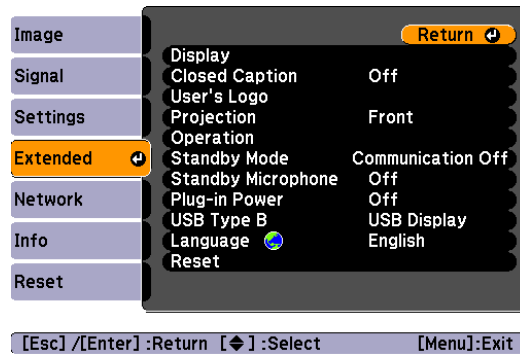
You can also use this menu to turn off the startup screen, disable message display, or change the background color.

note

*To unlock the projector, press the **Enter** button on the projector's control panel for 7 seconds.*

Customizing Power and Operation

You can use the Extended menu to customize the way the projector displays images, enable quick startup, turn sleep mode on or off, and customize other projector operations.




- **Display**
Use this setting to turn off the display of messages, change the background color, enable logo display, or turn off the startup screen display.
- **Closed Caption**
Lets you display closed captioning for content that provides it.
- **User's Logo**
Create a custom startup screen, as described on page 114.
- **Projection**
Select **Front** (to project from the front of a screen and right side up), **Front/Ceiling** (when the projector is mounted upside-down from the ceiling), **Rear** (to project from behind onto a transparent screen), or **Rear/Ceiling** (to project from behind onto a transparent screen when the projector is mounted upside-down from the ceiling).

note

If you hold down the A/V Mute button on the remote for about 5 seconds, you switch between Front and Front/Ceiling or Rear and Rear/Ceiling.

■ Operation

Use this menu to enable the following functions:

Direct Power On to have the projector start when the power cable is connected (without pressing the  power button).

Sleep Mode to have the projector turn off automatically if it is idle (and no signal is received) for the amount of time you select as the **Sleep Mode Timer** (1 to 30 minutes).

Lens Cover Timer to have the projector turn off automatically after 30 minutes when the A/V Mute slide is closed.

High Altitude Mode to increase cooling at high altitudes. Enable this setting when you are using the projector above 4900 ft (1500 m).

■ Standby Mode

Select **Communication On** to enable the following features, even when the projector is in standby mode (the power light is orange):

- monitoring of the projector over a network (PowerLite 84+/85+/825+/826W+ only)
- audio output from a connected microphone (you must also set the Standby Microphone setting as described below)
- video output to a connected external monitor (see page 53 for more information) (PowerLite 84+/85+/825+/826W+ only)

■ Standby Microphone

When the Standby Mode is set to **Communication On**, you can set Standby Microphone to **On**. This allows you to use a microphone connected to the projector even in standby mode, when Power On Protect is off.

■ Plug-in Power

Select **On** when you are connecting a condenser microphone.

note

If Direct Power On is enabled, the power cable is connected, and a power outage occurs, the projector will start when the power is restored.

Do not use the projector at altitudes above 7500 ft (2,286 m).

- **USB Type B**

Select **USB Display** to project your computer's display through the projector's USB Type B port (see page 50). Choose **Wireless Mouse** to use the remote control as a wireless mouse when your computer is connected to the **Computer1** or **Computer2** port; see page 51.

- **Language**

Select the language to be used for the projector menus.

6

Maintaining the Projector

warning

Before you clean any part of the projector, turn it off and unplug the power cord. Never open any cover on the projector, except the lamp cover. Dangerous electrical voltages in the projector can injure you severely. Do not try to service this product yourself, except as specifically explained in this User's Guide. Refer all other servicing to qualified service personnel.

Your projector needs little maintenance. All you have to do is keep the lens clean. You may also need to clean the air filter and vent. A clogged air filter or vent can block ventilation needed to cool the projector.

The only parts you should replace are the lamp and air filter. If any other part needs replacing, contact your dealer or a qualified servicer.

This chapter covers the following:

- Cleaning the lens
- Cleaning the projector case
- Cleaning the air filter and vent
- Replacing the lamp and air filter
- Transporting the projector

Cleaning the Lens

Clean the lens whenever you notice dirt or dust on the surface.

To remove dirt or smears on the lens, use lens-cleaning tissue. If necessary, moisten a soft cloth with lens cleaner and gently wipe the lens.

Cleaning the Projector Case

Before you clean the case, turn off the projector and unplug the power cord.

- To remove dirt or dust, wipe the case with a soft, dry, lint-free cloth.
- To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral detergent. Then wipe the case.

caution

Do not use wax, alcohol, benzene, paint thinner, or other chemical detergents. These can damage the case.

Never spray a liquid of any kind directly on the projector or its lens. Always apply it to a cloth first.


Using a spray that contains a flammable gas to clean the lens can result in a fire due to the high temperature of the projector lamp.

Cleaning the Air Filter and Vent

Your projector includes an air filter to ensure the best performance. If dust collects on the air filter or vent, clean them as described below. Dust clogs prevent proper ventilation and can cause overheating and damage the projector.

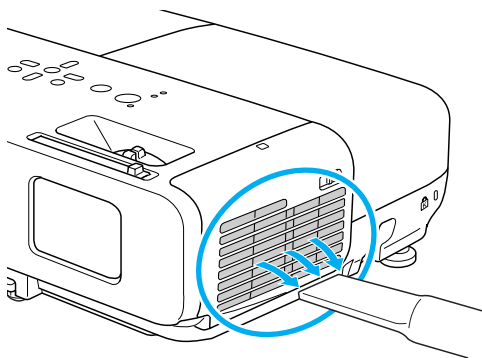
If you see the following message, clean the air filter immediately.

The projector is overheating. Make sure nothing is blocking the air vent, and clean or replace the air filter.

1. Turn off the projector. When the  power light stops flashing and you hear two beeps, unplug the power cord.
2. To clean the intake vent and filter, use a small vacuum cleaner designed for computers and other office equipment. If you don't have one, gently clean the vent with a soft brush (such as an artist's paintbrush).

You can remove the air filter to clean both sides. For instructions, see page 126.

The exhaust vent is on the other side of the projector



3. If the dirt is difficult to remove or the filter is damaged, or if the message appears again after cleaning, replace the filter as described on page 126. To purchase a new filter, contact your dealer, call Epson at 800-GO-EPSON (800-463-7766), or purchase online at www.epsonstore.com (U.S. sales) or www.epson.ca (Canadian sales).

note

To order replacement air filters, request part number V13H134A22. See page 13 for ordering information.

note

When you replace the lamp for your projector, you should also replace the filter.

To check how long the lamp has been in use, see page 135.

Turn off this product when not in use to prolong the life of the projector.

warning

Let the lamp cool fully before replacing it.



In the unlikely event that the lamp has broken, small glass fragments may be present and should be removed carefully to avoid injury.

If the lamp is used after the replacement period has passed, the possibility that the lamp may break increases. When a lamp replacement message appears, replace the lamp with a new one as soon as possible, even if it is still working.

Replacing the Lamp and Air Filter


The life span of the projection lamp is about 5000 hours if **Power Consumption** in the Setting menu is set to **Normal** (default), and 6000 hours if **Power Consumption** is set to **ECO**.

It is time to replace the lamp when:

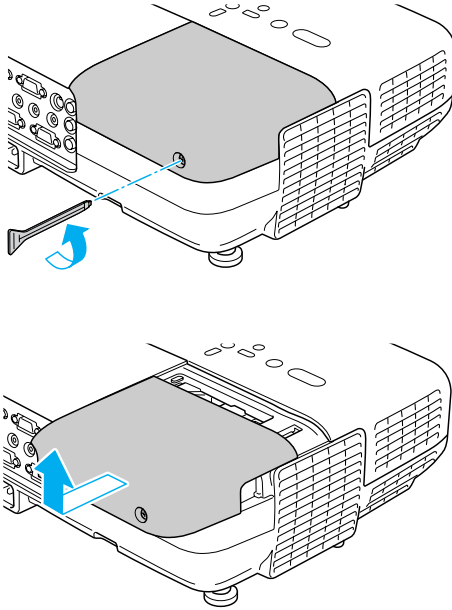
- The projected image gets darker or starts to deteriorate.
- The message **Replace the lamp** appears on the screen when the lamp comes on and the lamp warning light  flashes orange. To maintain projector brightness and image quality, replace the lamp as soon as possible.
- The lamp warning light  flashes red (the lamp is burnt out).

Contact your dealer, call Epson at 800-GO-EPSON (800-463-7766), or purchase online at www.epsonstore.com (U.S. sales) or www.epson.ca (Canadian sales). Request part number V13H010L50 for the genuine Epson projector lamp.

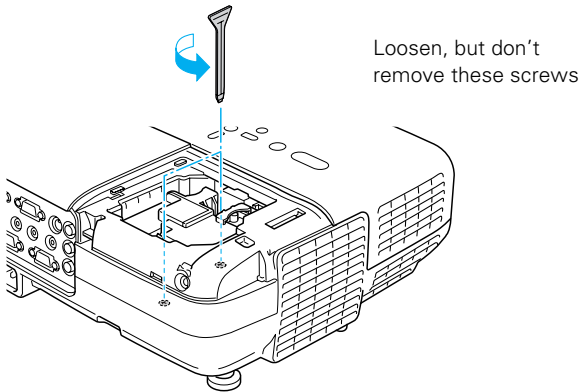
Replacing the Lamp

1. Turn off the projector.
2. When the  power light stops flashing and you hear two beeps, unplug the power cord.
3. Let the projector cool for at least an hour (if it has been on). The lamp is extremely hot immediately after use.

4. Loosen the lamp cover screw (you can't remove it). Then slide the lamp cover and lift it off of the projector.



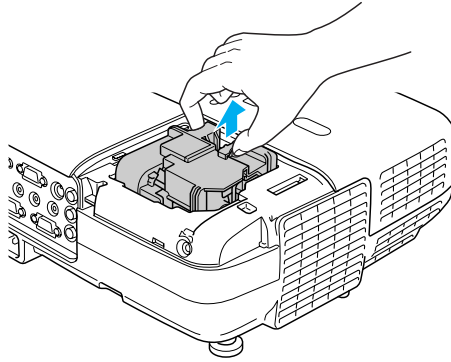
5. Loosen the two screws holding the lamp in place (you can't remove them).



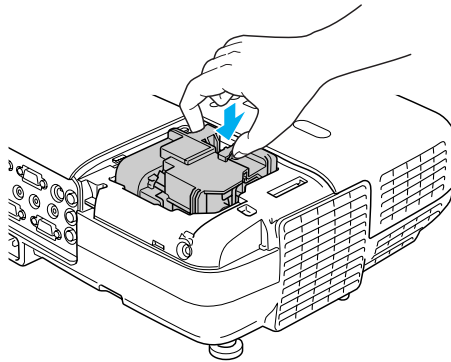
note

Ⓜ The lamp(s) in this product contain mercury. Please consult your state and local regulations regarding disposal or recycling. Do not put in the trash.

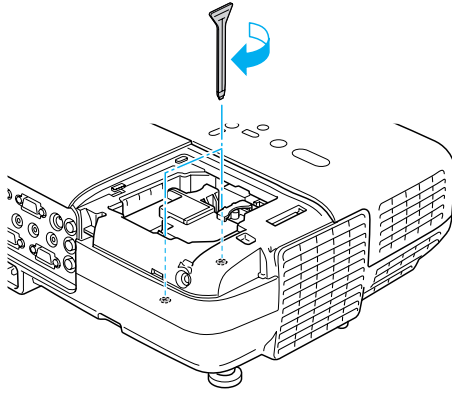
6. Hold the lamp as shown and pull it straight out.



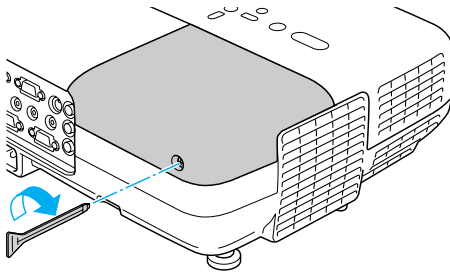
7. Gently insert the new lamp. (If it doesn't fit easily, make sure it is facing the right way.)
8. Push down the side marked **PUSH** until it snaps in.



9. Once the lamp is fully inserted, tighten its screws.




10. Replace the lamp cover, then tighten its screw.

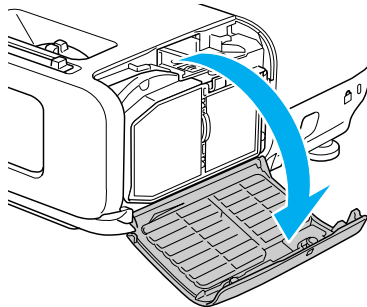
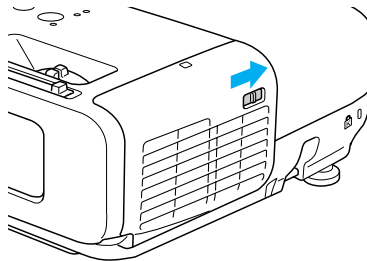


11. Reset the lamp timer as described page 128.

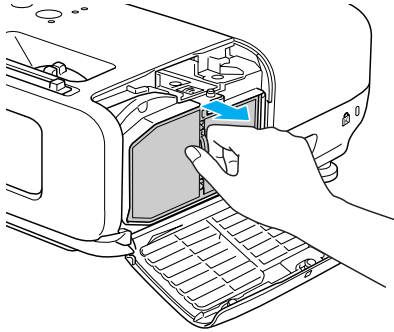
Replacing the Air Filter

If the filter is difficult to clean or damaged, or if the overheating message appears after cleaning, you need to replace the filter. To obtain a new filter, contact your dealer, call Epson at 800-GO-EPSON (800-463-7766), or purchase online at www.epsonstore.com (U.S. sales) or www.epson.ca (Canadian sales).

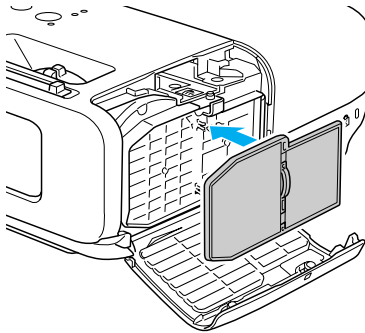
1. Turn off the projector.
2. When the  power light stops flashing and you hear two beeps, unplug the power cord.
3. Open the air filter cover by sliding the switch and pulling down the cover.



4. Grasp the tab and pull the filter straight out.



5. Press in the new air filter until it clicks in place.




6. Close the air filter cover.

note

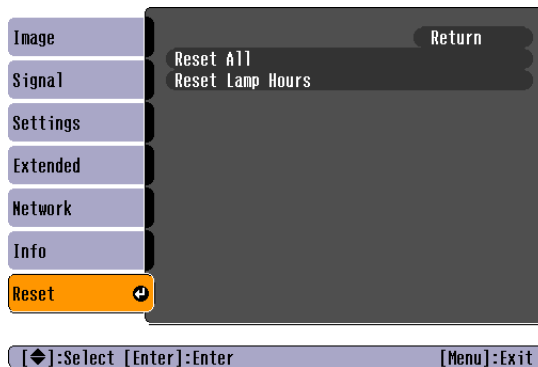
The air filter contains polycarbonate, ABS resin, and polyurethane foam. Dispose of used air filters properly in accordance with your local regulations.

Resetting the Lamp Timer

After you replace the lamp, you need to reset the lamp timer using the projector's menus.

1. Press the **Menu** button on the remote control or on the projector's control panel. You see the main menu.
2. Use the  buttons on the remote control (or the navigational buttons on the projector) to highlight **Reset**, then press **Enter**.

You see this screen:



3. Select **Reset Lamp Hours** and press **Enter**.
4. When you see the prompt, select **Yes** and press **Enter**.
5. When you're finished, press **Esc** or **Menu** to exit the Menu system.

Transporting the Projector

The projector contains many glass and precision parts. Follow these guidelines to prevent damage:

- Close the A/V Mute slide (lens cover) to protect the lens.
- When shipping the projector for repairs, use the original packaging material if possible. If you do not have the original packaging, use equivalent materials, placing plenty of cushioning around the projector.
- When transporting the projector a long distance, first place it in a hard-shell shipping case, then pack it in a firm box with cushioning around the case. (An optional case is available from Epson; see page 13.)

note

Epson shall not be liable for any damages incurred during transportation.

7

Solving Problems

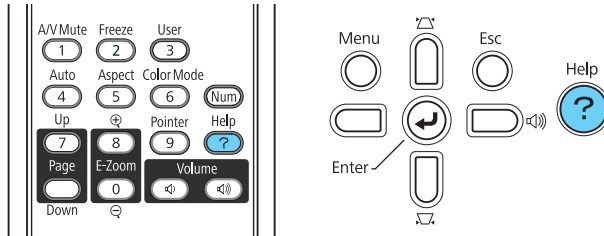
This chapter helps you solve problems with your projector, and tells you how to contact technical support for problems you can't solve yourself. The following information is included:

- Using the projector's on-screen help system
- What to do when the projector's status lights flash
- Solving projector operation problems
- Solving problems with the image or sound
- Solving network problems
- Solving problems with the remote control
- Contacting technical support


Using On-Screen Help

If the image doesn't look right or your audio isn't working, you can get help by pressing the ? **Help** button on top of the projector or on the remote control.

1. Press the ? **Help** button on the remote control or on the projector.




You see the Help Menu.

2. Use the  pointer button on the remote control or the navigational buttons on the projector to highlight menu items.
3. Press the **Enter** button on the remote control or on the projector to select the menu item.
4. To exit the help system, press the ? **Help** button.

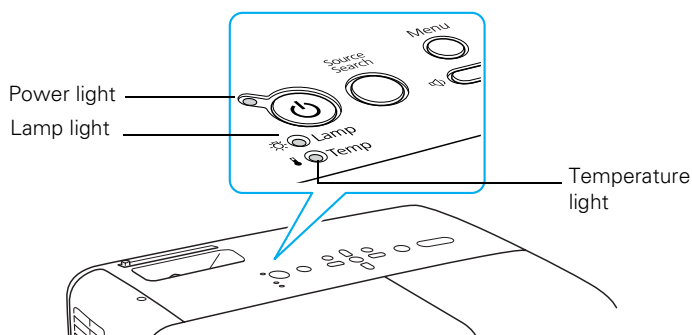
If none of the suggestions solve your problem, see additional solutions to problems in the following sections.

Checking Projector Status

If your projector isn't working correctly, first turn it off, wait for it to cool (the projector beeps twice and the  power light stops flashing orange), and unplug it. Then plug the power cord back in and turn on the projector. If this doesn't solve the problem, check the lights on top of the projector.












What To Do When the Lights Flash

The lights on top of the projector indicate the projector's status.









Refer to the following table for a complete description of the projector's status lights:

Status lights

| Light | Status | Description |
|---|---------------------|---|
|  | Orange | The projector is in sleep or standby mode. You can unplug it or you can press the  power button to turn it on. |
|  | Flashing green | The projector is warming up. Wait for the image to appear. |
|  | Green | The projector is operating normally. |
|  | Flashing orange | The projector is cooling down or preparing network monitoring. You can't turn it back on (and you should not unplug it) until the light stops flashing and remains orange. |
|  | Red or flashing red | There is a problem with the projector. Check the other two lights and the information in the rest of this table to diagnose the problem. |
|   | Flashing red | Power is cut off because of an internal problem. Unplug the power cord and contact Epson for help, as described on page 149. |
|    | Flashing red | The auto iris or ballast is malfunctioning. Unplug the power cord and contact Epson for help, as described on page 149. |

Status lights (continued)

| Light | Status | Description |
|--|-----------------|--|
|  | Flashing red | There is a problem with the fan or temperature sensor. Stop using the projector, disconnect the power cable, and contact Epson as described on page 149. |
|  | Flashing orange | Rapid cooling is in progress. Although this is not an abnormal condition, projection will stop automatically if the temperature rises higher. Make sure there is plenty of space around the projector for ventilation, and that the air filter and vents are clear. If you're using the projector above 4900 feet (1500 m), turn on High Altitude Mode ; see page 117. |
|  | Red | <p>The projector is overheating, which turns the lamp off automatically. Wait until the cooling fan stops, then unplug the power cord. Plug the power cord back in and press the  power button. Make sure the room temperature is not above 95 °F (35 °C), and there is plenty of space around the projector for ventilation. If you're using the projector above 4900 feet (1500 m), turn on High Altitude Mode; see page 117.</p> <p>The air filter or vent may be clogged. Clean them or replace the air filter as described on page 121.</p> <p>If the projector continues to overheat after you clean or replace the air filter, contact Epson for help as described on page 149.</p> <p>Warning: Except as specifically explained in this <i>User's Guide</i>, do not attempt to service this product yourself.</p> |
|  | Flashing orange | It's time to replace the lamp. See page 122 for instructions. If you continue to use the lamp after the replacement warning, there is an increased possibility that the lamp may break. |
|  | Flashing red | <p>The lamp may be burnt out. First make sure the lamp cover is securely installed. If that's not the problem, let the lamp cool, remove the lamp, and check if it is cracked. If it is cracked, replace it as described on page 122. If it not cracked, reinstall the lamp and try using it again.</p> <p>The air filter or vent may be clogged. Clean them or replace the air filter as described on page 121.</p> <p>If these steps do not resolve the problem, contact Epson as described on page 149.</p> |

Viewing Lamp Usage and Other Information

Use the Info menu to view information about the display settings of your computer and the number of hours the lamp has been used.

Press the **Menu** button and highlight the **Info** menu.

You see the lamp usage hours and various input signal settings on the right.





The life span of the lamp is about 5000 hours if the **Power Consumption** setting in the Settings menu is set to **Normal** (default), and 6000 hours if the **Power Consumption** setting is set to **ECO**. Make sure you have a spare lamp handy if the usage hours on this menu are close to the life span of your lamp.

note

The information displayed depends on the input signal currently selected.

Solving Projector Operation Problems

The power doesn't turn on.

- If the projector doesn't turn on when you press the  power button, make sure the power cable is connected to the projector and plugged into a working electrical outlet.
- The power cable may be defective. Disconnect the cable from the outlet and contact Epson as described on page 149.
- Check to see if the A/V Mute slide is closed.
- Check the status lights (see page 133).
- Try using the  power button on both the projector's control panel and the remote control. If only the control panel  power button doesn't work, the Control Panel Lock setting may be set to **Full Lock** (see page 115). If only the remote control  power button doesn't work, the projector's remote control sensors may have been deactivated by the Remote Receiver setting (see page 109).

The buttons on the projector don't work.






If the control panel buttons have been locked, try using the remote control instead. See page 115 for information about locking the control panel.

You hear the projector's fan after the power has been turned off.

If Standby Mode is set to Communication On, the fan continues to operate after the projector has cooled down. See page 117 for more information about this setting.

Solving Problems with the Image or Sound

No image appears on the screen.

- Check that the  power light is green, not flashing.
- The projector may be in standby or sleep mode. If the  power light is orange, press the  power button to turn the projector on.
- If the power was switched off and then on again, the projector may be cooling down. Wait until the  power light stops flashing and remains orange; then press the  power button again.
- Press the **A/V Mute** button on the remote control to make sure the picture has not been turned off temporarily.
- Open the A/V Mute slide, if it is closed.
- The attached computer may be in sleep mode or displaying a black screen saver. Try pressing a key on the computer.
- If you are projecting from a DVD player or other video source, make sure you turn it on and press its **Play** button.

- If you're projecting through your computer's USB port, make sure the **USB Type B** setting in the Extended menu is set to **USB Display** (see page 118). The USB display feature is not available for Windows 98 or Me.

With Windows, you may need to install the USB display drivers manually by clicking **My Computer** or **Computer**, then **EPSON_PJ_UD**, then **EMP_UDSE.EXE**. If nothing is projected after the USB display drivers are installed, click **All Programs**, **EPSON Projector**, **EPSON USB Display**, then **EPSON USB Display Vx.x** on your computer.


With Mac OS X, click the **USB Display** icon in the Dock. If there is no USB Display icon in the Dock, open the **USB Display** folder in the Applications folder and run **USB Display**.

- If you see a black screen and you are connected through your computer's USB port (or through your network with your PowerLite 85+/825+/826W+), the application may be using DirectX drawing features, which are not supported.


You've connected a computer and see a blue screen with the message No Signal displayed.

- Make sure the cables are connected correctly and securely, as described on page 48.
- If you've connected more than one computer and/or video source, you may need to press the **Source Search** button on the remote control or projector or one of the source buttons on the remote control to select the correct source. Pressing the **Computer** button on the remote control will toggle between Computer1 and Computer2 inputs. Allow a few seconds for the projector to sync up after pressing the button.

If you're using a PC notebook:

- Press the function key on your keyboard that lets you display on an external monitor. It may have an icon such as , or it may be labeled **CRT/LCD**. You may have to hold down the **Fn** key

while pressing it. Allow a few seconds for the projector to sync up after changing the setting. Check your notebook's manual or online help for details.

On most systems, the  key lets you toggle between the LCD screen and the projector, or display on both at the same time.

- Depending on your computer's video card, you might need to use the Display utility in the Control Panel to make sure that both the LCD screen and external monitor port are enabled. See your computer's documentation or online help for details.

If you're using Mac OS X:

1. Open **System Preferences**.
2. Click **Display** or **Displays**.
3. Click **Detect Displays**.
4. Do one of the following:

Mac OS X 10.6.x users: Click **Show displays** in menu bar.

Other Mac OS X users: Make sure the **VGA Display** or **Color LCD** dialog box is selected, click the **Arrangement** or **Arrange** tab, then make sure the **Mirror Displays** checkbox is selected.


The message Not Supported is displayed.

- Depending on the source you're projecting from, make sure the correct **Input Signal** or **Video Signal** is selected in the **Signal** menu (see page 107).
- Make sure your computer's resolution doesn't exceed UXGA (1600 × 1200) and the frequency or refresh rate is supported by the projector (see page 157). If necessary, change your computer's resolution setting.

The Projector and Notebook Don't Display the Same Image

If you're projecting from a notebook, and you can't see your image on the projection screen and on your computer at the same time, follow these guidelines.

If you're using a PC notebook:

- On most systems, there's a function key that lets you toggle between the LCD screen and the projector, or display on both at the same time. It may be labeled **CRT/LCD** or have an icon such as . You may have to hold down the **Fn** key while pressing it. Allow a few seconds for the projector to sync up after changing the setting.
- If the function key doesn't permit you to display simultaneously on both screens, you should check your monitor settings to make sure both the LCD screen and the external monitor port are enabled.

From the Control Panel, open the **Display** utility, select the **Settings** option, then select the **Advanced** option (in Windows Vista, right-click on the desktop, select **Personalize**, select **Display Settings**, then select **Advanced Settings**). The method for adjusting the settings varies by brand; you may need to click a **Monitor** tab, then make sure the external Monitor port is set as your primary display and/or enabled. See your computer's documentation or online help for details.

If you're using Mac OS X:

You may need to set up your system to display on the projector screen as well as the LCD screen. Make sure your projector is connected and follow these steps:

1. Open **System Preferences**.
2. Click **Display** or **Displays**.

3. Click **Detect Displays**.
4. Do one of the following:



Mac OS X 10.6.x users: Click **Show displays** in menu bar.

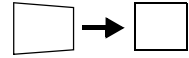
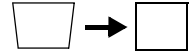
Other Mac OS X users: Make sure the **VGA Display** or **Color LCD** dialog box is selected, click the **Arrangement** or **Arrange** tab, then make sure the **Mirror Displays** checkbox is selected.

Only part of the image is displayed.

- Press the **Aspect** button on the remote control to select a different setting (see page 36).
- If projecting from a computer, press the **Auto** button on the remote control. Also make sure the image **Position** setting is correct in the **Signal** menu (see page 107).
- Check the projector's **Resolution** setting (see page 106). Select **Normal** or **Wide**, depending on the size of your computer's display panel.
- Make sure your computer is not set to display an extended desktop or dual display.
- Press the **Esc** button on the remote control to cancel the **E-Zoom** function.
- Make sure your computer's resolution setting is correct. Ideally, it should be 1280 × 800 to match the projector's native resolution for the PowerLite 826W+, or 1024 × 768 for the PowerLite 84+/85+/824+/825+. If this option isn't available, select one of the other compatible video formats listed on page 157.
- You also may need to modify existing presentation files if you created them for a different resolution. See your software documentation for specific information.

The image isn't square, but keystone-shaped.

- If the top or bottom of the image is broader, press the  or  button on the projector until the image is square.
- If the projector is angled toward the screen from the left or right, the image will be broader on one side. Center the projector in front of the middle of the screen, facing the screen squarely.
- Enable the Auto Keystone feature to automatically fix the shape. See page 108.



The image contains static or noise.

- If you're using a computer cable longer than 6 feet, or an extension cable, the image quality may be reduced. Use a distribution amplifier for longer distances; you can purchase one from Epson (see page 13).
- Keep your computer and video cables away from the power cord as much as possible to prevent interference.
- The video signal may be split between the computer and the projector. If you notice a decline in the projected image quality when the image is displayed simultaneously on your notebook computer and the projector, turn off the notebook's LCD display.
- Depending on the source you're projecting from, make sure the correct **Input Signal** or **Video Signal** is selected in the Signal menu (see page 107).
- If still images are jittery when you are projecting from a video source, turn on the **Progressive** setting in the Signal menu (see page 107).
- Select **Noise Reduction** in the Signal menu, then try selecting NR1 or NR2.

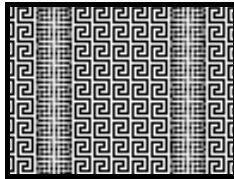
- Make sure your computer's resolution setting is correct. Ideally, it should be 1280 × 800 to match the projector's native resolution for the PowerLite 826W+, or 1024 × 768 for the PowerLite 84+/85+/824+/825+. If this option isn't available, select one of the other compatible video formats listed on page 157.
- If you are projecting from a computer, press the Auto button on the remote control. If that doesn't work, you can adjust the Tracking and Sync settings in the Signal menu (see page 106).

The image is blurry.

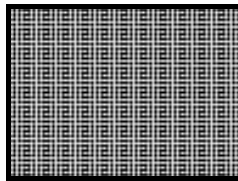
- There may be dirt or smears on the lens. Clean the lens as described on page 120.
- Adjust the focus using the focus ring (see page 27).
- Make sure the lens is not fogged by condensation. You may need to wait before using the projector after moving it from a cold environment to a warm environment.
- Make sure the projector is facing the screen squarely, to eliminate the need for keystone correction.
- Adjust the **Sharpness** setting on the Image menu (see page 105). When you change video settings, you should be able to see the effect on the screen immediately. If you're projecting from a computer, you may also need to adjust the tracking and sync as described in the next section. If you don't like the new settings, you can always select **Reset** to return to the factory default settings.
- Make sure the projector is within the recommended distance range (see page 16).

You see vertical bands or the image still looks blurry after trying the solutions in the previous section.

- If you're projecting from a computer and displaying an image that contains a lot of fine detail, you may notice vertical bands or some of the characters may look heavy or blurred. Press the **Auto** button on the remote control to reset the projector's tracking and sync settings.
- If further adjustment is needed, you can fine-tune the **Tracking** and **Sync** settings manually using the **Signal** menu, as described on page 106.
 1. Fill the screen with an image containing fine detail, such as black text on a white background.
 2. Adjust the **Tracking** to eliminate vertical bands.



3. Adjust the **Sync** setting to increase the image sharpness.



The image is too light or dark, or colors are incorrect.

- Press the **Color Mode** button to select a different color mode (see page 38).
- Try adjusting the brightness and color settings in the **Image** menu (see page 104).
- Try changing the **Power Consumption** in the **Settings** menu (see page 108).
- Check your computer display settings to correct the color balance.

note

Because of the different technologies used, your projected image may not exactly match the colors on your notebook or computer monitor.

- The projector's lamp may need to be replaced. See page 122 for instructions.
- In the Image menu, select **Reset** to change the color settings back to their defaults.
- Make sure the cables are connected correctly and securely (see page 47).


The mouse pointer flickers when you are projecting through the USB cable connection.



Select All Programs > EPSON Projector > EPSON USB Display > EPSON USB Display Vx.x., then clear the Transfer layered window checkbox.

Moving images are not displayed

If you're using a notebook computer or a computer with a built-in LCD screen and its signal is being output to both the LCD and the projector, you may need to change the computer's settings to that the signal only outputs to the projector. See your computer's documentation or online help for details.

There is no sound, or the sound is not loud enough.

- Press the  button on the projector or remote control to increase the volume.
- Make sure **A/V Mute** is not enabled. (The **A/V Mute** button on the remote control may have been pressed.)
- Try adjusting the **Volume** setting in the Settings menu (see page 108).
- If you're using a DVD player or VCR or other video source, make sure the volume is not turned all the way down or muted. Also, make sure the cables are connected correctly, as described on page 59.
- Make sure you are using a "no resistance" audio cable.

- Make sure the audio cable is connected correctly and securely at both ends (see page 59). For computer audio, connect the cable to your computer's  headphone jack or  audio out jack. If you need to disconnect or reconnect the cable, lower the volume first.
- Make sure the volume control on your computer is not turned all the way down or muted. In Windows, you may be able to use the volume control in your Windows system tray (lower right corner of the screen). On a Mac, you may be able to adjust the volume from your menu bar (top right corner of the screen) or via the volume control function keys.
- If you are using a microphone connected to the projector's Mic port, make sure the cable is connected correctly and securely and the Mic Input Level option on the Settings menu is adjusted correctly. See page 109 for more information. If you need to disconnect or reconnect the cable, lower the volume first.
- If you are using a condenser microphone, set the Plug-in Power setting to On in the Extended menu.

Solving Network Problems

You can't display an image using Quick Wireless Connection. (PowerLite 85+/825+/826W+ only)

You may need to restart your computer to connect.

You can't connect to the projector using EasyMP Network Projection. (PowerLite 85+/825+/826W+ only)

- Make sure the network cable is connected, as described on page 64.
- If you are using the optional wireless LAN module, make sure it is installed correctly in the projector, as shown on page 67.
- Restart your computer.
- Make sure your projector and computer are configured correctly; see page 71 (Ad Hoc mode) or page 78 (Access Point mode).

- If you are using the optional wireless LAN module, make sure that you have sufficient wireless signal strength (above 50 percent). On a Mac, check the AirPort icon on the Mac menu bar. In Windows, see the documentation for your computer's wireless card or adapter for details.
- Make sure you aren't projecting one of the EasyMP Network Projection configuration screens. (You should see a message that the projector is ready to connect.) If you have to exit a configuration screen, restart EasyMP Network Projection.
- If the projector is configured for Access Point mode and you're using DHCP, allow time for your projector to appear. It takes the server a little while to pick up the IP address.
- If you've changed any settings for your projector or network, or restarted your computer, allow a minute or two for the connection to appear. If you're using AirPort, try turning AirPort off and then on again.
- Make sure that you're trying to connect to the right network. In Windows, verify that you've enabled your computer's connection to the access point (see page 84) or that your wireless card or adapter is enabled and its SSID is set to match the projector's SSID (see page 76). On a Mac, click the AirPort icon at the top of your Mac desktop to make sure AirPort is turned on and the projector's SSID or your AirPort network is selected.
- If you have an access point or AirPort base station and you're not using DHCP, check your projector's IP address on the Access Point mode advanced settings screen. The first three segments of the IP address should be identical to the first three segments of the IP address of your access point or base station. The last segment of the projector's IP address should be close, but not identical, to the last segment of the IP address of the access point or base station.
- If you're not using DHCP, check your projector's Gateway address on the projector's Access Point mode advanced settings screen. It should be identical to the IP address for your access point or AirPort base station.

- If you're using a projector keyword, it changes each time you turn the projector off and then on again. Check the projector's keyword on the LAN standby screen and enter it at the prompt.
- If you're using AirPort, check the configuration of your network. Start the AirPort Admin utility, select your base station, click **Configure** and click **Show All Settings**. Click the **Network** tab. If you set up your projector to connect in DHCP mode, turn on **Distribute IP Addresses** and **Share a Single IP Address**.
- If you're using AirPort and DHCP is turned off on your projector's Access Point mode advanced settings screen, make sure **Distribute IP Addresses** is off.
- If you're using Access Point mode and you're connecting to the wrong network, you may be experiencing signal interference from another network. Try resetting your access point or base station, then restart EasyMP Network Projection.
- If you're using AirPort, the projector's SSID should match the AirPort network name, not the name of the AirPort base station. To check the network name, start the AirPort Admin utility, select your base station, and click **Configure**. Then click **Show All Settings**. The network name appears on the AirPort tab.
- If you're prompted for a password when you connect, enter the WEP encryption key (if you're using WEP encryption).

You are not receiving mail when a projector problem occurs.

- Make sure the Mail settings are correct in the Network menu. For details, see page 94.
- To receive mail notification when the projector is in standby mode, you need to set **Standby Mode** to **Communication On** in the Extended menu. See page 117.
- Make sure the network cable or Wireless 802.11a/b/g Module (PowerLite 85+/825+/826W+ only) is securely and correctly connected.
- Make sure power is being supplied to the projector.

Solving Problems with the Remote Control

The projector doesn't respond to remote control commands.

- The remote control's batteries may not be installed correctly or may be low on power. To change the batteries, see page 32.
- Make sure you are within about 20 feet (6 meters) of the projector and within range of the projector's front or back sensor (approximately 30° to the left or right and 30° above or below).
- Dim the room lights and turn off any fluorescent lights. Make sure the projector is not in direct sunlight. Strong lighting, especially fluorescent lights, may affect the projector's infrared receivers. Also, turn off any nearby equipment that emits infrared energy, such as a radiant room heater. To avoid interference, you can also turn off the projector's front or back sensor with the **Remote Receiver** setting (see page 109), but this may limit where you can use the remote control.
- Make sure the projector's sensors have not been turned off with the **Remote Receiver** setting (see page 109).
- If any buttons are held for longer than 30 seconds, the remote enters sleep mode. Release any button that is held to wake the remote.
- If you're using the remote control as a wireless mouse, make sure the **USB Type B** setting in the Extended menu is set to **Wireless Mouse** (see page 118).

Where to Get Help

In the U.S. and Canada, see the sections below.

In Latin America, see the information on your *Guía de instalación* or *Guia de instalação* sheet.

Internet Support

Visit Epson's support website at www.epson.com/support and select your product for solutions to common problems. You can download utilities and documentation, get FAQs and troubleshooting advice, or e-mail Epson with your questions.

Speak to a Support Representative

To use the Epson PrivateLine Support service, call (800) 637-7661 and enter the PIN on the included Epson PrivateLine Support card. This is the fastest way of speaking to a live representative, and it's free. This service is available 6 AM to 6 PM, Pacific Time, Monday through Friday, for the duration of your warranty period.

You may also speak with a projector support specialist by dialing one of these numbers:

- U.S.: (562) 276-4394, 6 AM to 6 PM, Pacific Time, Monday through Friday.
- Canada: (905) 709-3839, 6 AM to 6 PM, Pacific Time, Monday through Friday.

Days and hours of support are subject to change without notice. Toll or long distance charges may apply.

Before you call for support, please have the following information ready:

- Product name (PowerLite 84+/85+/825+/826W+)
- Product serial number (located on the projector)
- Proof of purchase (such as a store receipt) and date of purchase
- Computer or video configuration
- Description of the problem

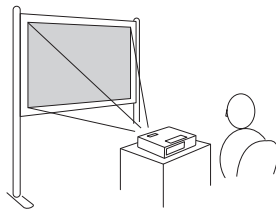
Purchase Supplies and Accessories

You can purchase screens, carrying cases, or other accessories from an Epson authorized reseller. To find the nearest reseller, call 800-GO-EPSON (800-463-7766). Or you can purchase online at www.epsonstore.com (U.S. sales) or www.epson.ca (Canadian sales).

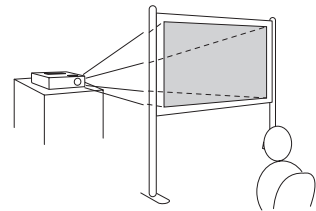
A *Projector Installation*

This appendix provides guidelines on installing the projector in a permanent location, such as a classroom or conference room.

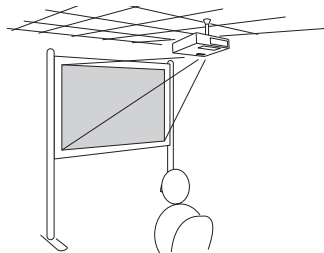
The projector can be installed for four different viewing setups: front projection, ceiling projection, rear projection onto a semi-transparent screen, or rear/ceiling projection, as shown:



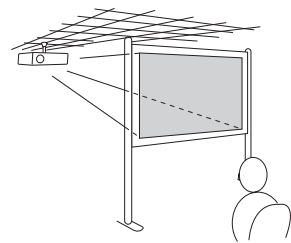
Front projection



Rear projection



Front/ceiling projection



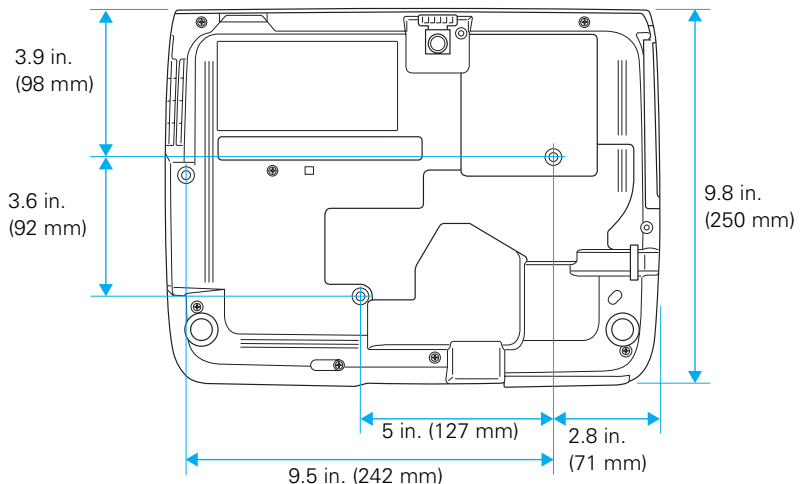
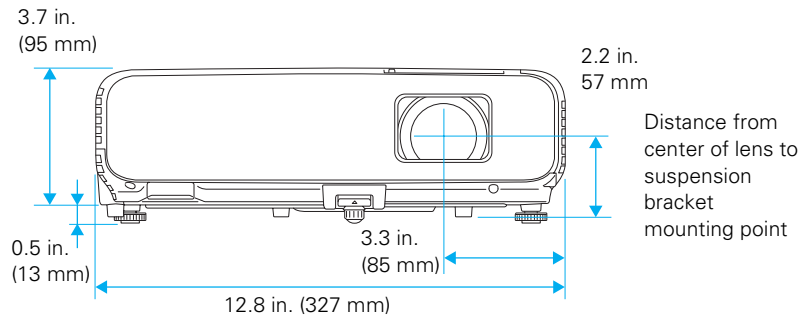
Rear/ceiling projection

To project from overhead, you'll need the optional ceiling mounting hardware; see page 13 for ordering information. You'll also need to select **Front/Ceiling** or **Rear/Ceiling** as the Projection option in the projector's Extended menu to flip the image upside-down. To project from the rear, onto a semi-transparent screen, select **Rear** or **Rear/Ceiling** (see page 116).

If you're mounting the projector on the ceiling and you place it above screen level, you'll have to tilt the projector down to position the image on the screen. This causes the image to lose its square shape. You can correct the distortion using the **Keystone** function in the projector's menu system (see page 108).

If you place the projector so that the base of the lens is level with the bottom of the screen, the image should be square and you won't have to adjust it. If you place the lens lower than the bottom of the screen, you'll have to tilt the projector upward (which will cause the image to lose its square shape, as described above) if you want to fill the whole screen with the image.

The following illustrations provide measurements you can use when installing the projector:



B

Technical Specifications

General

Type of display Epson poly-silicon TFT active matrix

Resolution
(native format)

84+, 85+, 824+, 825+ 1024 × 768 pixels (XGA)

826W+ 1280 × 800 pixels (WXGA)

Color reproduction 16.8 million colors

Light output White light output

| | Normal Power Consumption Mode (ISO 21118) (lumens) | ECO Power Consumption Mode (lumens) |
|-----------|---|--|
| 84+/85+ | 2600 | 2080 |
| 824+/825+ | 3000 | 2400 |
| 826W+ | 2500 | 2000 |

Color light output

| | Normal Power Consumption Mode (lumens) |
|-----------|---|
| 84+/85+ | 2600 |
| 824+/825+ | 3000 |
| 826W+ | 2500 |

Contrast ratio 2000:1 with auto iris

| | |
|-----------------------|--|
| Image size | 28 to 300 inches (84+/85+/824+/825+) 25 to 280 inches (826W+) |
| Projection distance | 2.7 to 45.5 feet (0.83 to 13.86 meters) |
| Projection methods | Front, rear, upside-down (ceiling mount) |
| Internal sound system | 10 W monaural |
| Optical aspect ratio | |
| 84+, 85+, 824+, 825+ | 4:3 (horizontal:vertical) |
| 826W+ | 16:10 (horizontal:vertical) |
| Zoom ratio | 1:1.62 |
| Noise level | 28 dB in ECO Power Consumption mode, 35 dB in Normal Power Consumption mode |
| Keystone correction | Automatic (manual adjustment capability ±30° vertical keystone correction) |
| Mouse compatibility | Supports USB (type B) |

note

Lamp life will vary depending upon mode selected, environmental conditions, and usage. Brightness decreases over time.

Turn off this product when not in use to prolong the life of the projector.

Projection Lamp

| | |
|-------------------|---|
| Type | UHE (Ultra High Efficiency) |
| Power consumption | 200 W |
| Lamp life | Approx. 5000 hours (Normal Power Consumption mode) Approx. 6000 hours (ECO Power Consumption mode) |
| Part number | V13H010L50 |

Remote Control

| | |
|-----------|--------------------|
| Range | 20 feet (6 meters) |
| Batteries | Two AA |

Dimensions

| | |
|--------|------------------------------------|
| Height | 3.7 inches (95 mm), feet retracted |
| Width | 12.9 inches (327 mm) |
| Depth | 9.8 inches (250 mm) |
| Weight | 6.9 lb (3.1 kg) |

Electrical

| | |
|-------------------|--|
| Rated frequency | 50/60 Hz AC |
| Power supply | 100 to 120 VAC, 3.3 A 220 to 240 VAC, 1.5 A |
| Power consumption | Operating: 100 to 120 VAC 289 W (Normal Power Consumption mode) 238W (ECO Power Consumption mode) 220 to 240 VAC 275 W (Normal Power Consumption mode) 228W (ECO Power Consumption mode) Standby: 100 to 120 VAC, 0.4 W (Communication off) 9.4 W (Communication on) 220 to 240 VAC, 0.7 W (Communication off) 9.5 W (Communication on) |

Environmental

| | |
|------------------------------|---|
| Temperature | Operating: 41 to 95 °F (5 to 35 °C) Storage: 14 to 140 °F (–10 to 60 °C) |
| Humidity (non-condensing) | Operating: 20 to 80% RH Storage: 10 to 90% RH |
| Operating altitude | 0 to 7,500 ft (0 to 2,286 m) |

Safety

| | |
|---------------|---|
| United States | FCC 47CFR Part 15B Class B (DoC) UL60950-1 Second Edition (cTUVUS Mark) |
| Canada | ICES-003 Class B CSA C22.2 No. 60950-1-07 (cTUVUS Mark) |



Pixelworks™ DNX™ ICs are used in this projector.

Compatible Video Formats

The projector supports NTSC, PAL, and SECAM international video standards, as well as the monitor display formats listed below.

To project images output from a computer, the computer's video card must be set at a refresh rate (vertical frequency) that's compatible with the projector. Some images are automatically resized using Epson's SizeWise™ technology to display in the projector's "native" format (XGA or WXGA). The frequencies of some computers may not allow images to display correctly; see your computer's documentation for details.

| Mode | Refresh Rate (Hz) | Resolution |
|------------|-------------------|-------------|
| VGA—60 | 60 | 640 × 480 |
| VESA—72 | 72 | 640 × 480 |
| VESA—75 | 75 | 640 × 480 |
| VESA—85 | 85 | 640 × 480 |
| SVGA—56 | 56 | 800 × 600 |
| SVGA—60 | 60 | 800 × 600 |
| SVGA—72 | 72 | 800 × 600 |
| SVGA—75 | 75 | 800 × 600 |
| SVGA—85 | 85 | 800 × 600 |
| XGA—60 | 60 | 1024 × 768 |
| XGA—70 | 70 | 1024 × 768 |
| XGA—75 | 75 | 1024 × 768 |
| XGA—85 | 85 | 1024 × 768 |
| WXGA—60-1 | 60 | 1280 × 768 |
| WXGA—60-2 | 60 | 1360 × 768 |
| WXGA—60 | 60 | 1280 × 800 |
| WXGA—75 | 75 | 1280 × 800 |
| WXGA—85 | 85 | 1280 × 800 |
| WXGA+—60 | 60 | 1440 × 900 |
| WXGA+—75 | 75 | 1440 × 900 |
| WXGA+—85 | 85 | 1440 × 900 |
| WSXGA+—60* | 60 | 1680 × 1050 |
| SXGA1—70 | 70 | 1152 × 864 |
| SXGA1—75 | 75 | 1152 × 864 |
| SXGA1—85 | 85 | 1152 × 864 |

| Mode | Refresh Rate (Hz) | Resolution |
|--------------|--------------------------|-------------------|
| SXGA2—60 | 60 | 1280 × 960 |
| SXGA2—75 | 75 | 1280 × 960 |
| SXGA2—85 | 85 | 1280 × 960 |
| SXGA+60 | 60 | 1400 × 1050 |
| SXGA+75 | 75 | 1400 × 1050 |
| SXGA3—60 | 60 | 1280 × 1024 |
| SXGA3—75 | 75 | 1280 × 1024 |
| SXGA3—85 | 85 | 1280 × 1024 |
| UXGA—60 | 60 | 1600 × 1200 |
| MAC13 | 67 | 640 × 480 |
| MAC16 | 75 | 832 × 624 |
| MAC19 | 75 | 1024 × 768 |
| MAC19-60 | 59 | 1024 × 768 |
| MAC21 | 75 | 1152 × 870 |
| NTSC | 60 | 720 × 480 |
| NTSC 4.43 | 60 | 720 × 480 |
| PAL | 50 | 720 × 576 |
| M-PAL | 60 | 720 × 576 |
| N-PAL | 50 | 720 × 576 |
| PAL60 | 60 | 720 × 576 |
| SECAM | 50 | 720 × 576 |
| HDTV (720p) | 60 | 1280 × 720 |
| HDTV (720p) | 50 | 1280 × 720 |
| HDTV (1080i) | 60 | 1920 × 1080 |
| HDTV (1080i) | 50 | 1920 × 1080 |
| TV480i | 60 | 720 × 480 |
| TV576i | 50 | 720 × 576 |
| SDTV (480p) | 60 | 720 × 480 |
| SDTV (576p) | 50 | 720 × 576 |

* Available only when you are using the PowerLite 826W+ and the resolution is set to Wide.

C

Notices

This appendix includes safety instructions and other important information about your projector.

Important Safety Instructions

Follow these safety instructions when setting up and using the projector:

- Do not look into the lens when the projector is on. The bright light can damage your eyes, and is especially dangerous for children and pets.
- Do not place the projector on an unstable cart, stand, or table.
- Do not operate the projector on its side, or while tilted to one side. Do not tilt the projector more than 30° forward or back.
- If the projector is mounted on a ceiling, it should be installed by qualified technicians using mounting hardware designed for use with this projector.
- If you use a ceiling mount and apply adhesives to the mount to prevent the screws from loosening, or if you use lubricants or oils on the projector, the projector case may crack and the projector may fall from its ceiling mount. This could cause serious injury to anyone under the mount and could damage the projector. When installing or adjusting a ceiling mount, do not use adhesives to prevent the screws from loosening and do not use oils or lubricants.
- Do not stand on the projector or place heavy objects on it.
- Do not use the projector where it may be exposed to rain, water, or excessive humidity.
- Unplug the projector from the wall outlet before cleaning. Use a dry cloth (or, for stubborn dirt or stains, a moist cloth that has been wrung dry) for cleaning. Do not use liquid or aerosol cleaners, or solvents such as alcohol, thinner, or benzine.
- Never spill liquid of any kind into the projector. Do not place any containers of liquid on top of the projector.

- Do not use the projector where there is excessive humidity or dust, near cooking or heating appliances, or in places where it may come into contact with steam or smoke.
- Never insert or drop objects of any kind through the projector's vents or openings. Do not leave metal, flammable, or foreign objects nearby.
- Do not use or store the projector or remote control in a hot location, such as near a heater, in direct sunlight, or in a closed vehicle.
- Do not block the slots and openings in the projector case. They provide ventilation and prevent the projector from overheating. If you are setting up the projector near a wall, leave at least 7.9 inches (20 cm) of space between the wall and the air exhaust vent.
- Do not operate the projector in a closed-in cabinet unless proper ventilation is provided.
- If you are using two or more projectors side-by-side, leave at least 2 feet (60 cm) of space between the projectors to allow for proper ventilation.
- You may need to clean the air filter and vent. A clogged air filter or vent can block ventilation needed to cool the projector.
- Do not store the projector outdoors for an extended length of time.
- Do not use the projector outside the required temperature range of 41 to 95 °F (5 to 35 °C). Doing so may cause an unstable display and could lead to projector damage.
- Do not store the projector outside the required temperature range of 14 to 140 °F (–10 to 60 °C) or in direct sunlight for long periods of time. Doing so may cause damage to the case.
- Do not touch the plug during an electrical storm. Otherwise, you may receive an electric shock.
- Unplug the projector when it will not be used for extended periods.
- Unplug the projector from the wall outlet and refer servicing to qualified service personnel under the following conditions: If it does not operate normally when you follow the operating instructions, or exhibits a distinct change in performance; If smoke, strange odors, or strange noises come from the projector; If the power cord or plug is damaged or frayed; If liquid or foreign objects get inside the projector, or if it has been exposed to rain or water; If it has been dropped or the housing has been damaged.
- Except as specifically explained in this *User's Guide*, do not attempt to service this product yourself. Refer all servicing to qualified personnel. Opening or removing covers may expose you to dangerous voltages and other hazards.

- Never open any covers on the projector except as specifically explained in this *User's Guide*. Never attempt to disassemble or modify the projector (including consumables). Refer all repairs to qualified service personnel.
- Use the type of power source indicated on the projector. Use of a different power source may result in fire or electric shock. If you are not sure of the power available, consult your dealer or power company.
- If you use the projector in a country other than where you purchased it, use the correct power cord for that country.
- Take the following precautions when handling the plug: Do not hold the plug with wet hands. Do not insert the plug into a dusty outlet. Insert the plug firmly into the outlet. Do not pull the power cord when disconnecting the plug; always be sure to hold the plug when disconnecting it. Do not overload wall outlets, extension cords, or power strips. Failure to comply with these precautions could result in fire or electric shock.
- Do not place the projector where the cord can be walked on.
- (Hg) The lamp(s) in this product contain mercury. Please consult your state and local regulations regarding disposal or recycling. Do not put in the trash.
- Do not place anything that can become warped or damaged by heat near the exhaust vents. Do not bring your hands or face close to the vents while projection is in progress.
- Before you move the projector, make sure its power is turned off, the plug is disconnected from the outlet, and all cables are disconnected.
- Never try to remove the lamp immediately after use because it will be extremely hot. Before removing the lamp, turn off the power and wait at least an hour to allow the lamp to cool completely.
- Do not place the source of an open flame, such as a lit candle, on or near the projector.
- Do not modify the power cord. Do not place heavy objects on top of the power cord or bend, twist, or pull it excessively. Keep the power cord away from hot electrical appliances.
- If the lamp breaks, ventilate the room to prevent gases contained in the lamp from being inhaled or coming in contact with the eyes or mouth.
- If the projector is mounted overhead and the lamp breaks, be careful to prevent pieces of glass from falling into your eyes or mouth when you open the lamp cover.
- Do not disassemble or damage the lamp or subject it to any impacts.
- Do not bring your face close the projector while it is in use.

- Do not use sprays containing flammable gas to clean the lens or filter. Do not spray a liquid of any kind directly on the projector or its lens. Do not use the projector where there may be flammable, explosive, or corrosive gases present in the atmosphere.
- Insert batteries so that the polarities are correct. Do not use batteries of different types or mix old and new batteries. Do not use batteries other than those specified in this *User's Guide*.
- If the batteries leak, wipe away battery fluid with a soft cloth. If fluid gets on your hands, wash them immediately.
- Replace the batteries as soon as they run out. Dispose of used batteries according to local regulations.
- Remove the batteries if you will not be using the remote control for a long period of time.
- Do not expose batteries to heat or flame and do not put them in water.
- Keep batteries out of the reach of children. Batteries are choking hazards and are very dangerous if swallowed.
- Do not start the projector while the volume is too high.
- Do not use the projector where there may be low or high temperature extremes or sudden changes in temperature.
- Do not set up the projector where it may be subjected to vibrations or shocks, or near high-voltage electrical wires or sources of magnetic fields.

WARNING: The cords included with this product contain chemicals, including lead, known to the State of California to cause birth defects or other reproductive harm. *Wash hands after handling.* (This notice is provided in accordance with Proposition 65 in Cal. Health & Safety Code §25249.5 and following.)

FCC Compliance Statement

For United States Users

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

For Canadian Users

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Software Notices (for PowerLite 85+/825+/826W+)

GNU GPL

This projector product includes the open source software programs which apply the GNU General Public License Version 2 or later version ("GPL Programs").

We provide the source code of the GPL Programs until five (5) years after the discontinuation of same model of this projector product.

If you desire to receive the source code of the GPL Programs, please contact the customer support of your region.

These GPL Programs are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

The list of GPL Programs is as follows and the names of author are described in the source code of the GPL Programs

The list of GPL Programs

busybox-1.7.2

libgcc1(gcc-4.2.3)

linux-2.6.20

patches

udhcp 0.9.8

uvc rev.219

wireless_tools 29

Pixelworks PWC950 SDK drivers

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Version 2, June 1991

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Version 2.1, February 1999

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The original and principal author of md5.h is L. Peter Deutsch <ghost@aladdin.com>. Other authors are noted in the change history that follows (in reverse chronological order):

- 2002-04-13 lpd Removed support for non-ANSI compilers; removed references to Ghostscript; clarified derivation from RFC 1321; now handles byte order either statically or dynamically.
- 1999-11-04 lpd Edited comments slightly for automatic TOC extraction.
- 1999-10-18 lpd Fixed typo in header comment (ansi2knr rather than md5); added conditionalization for C++ compilation from Martin Purschke <purschke@bnl.gov>.
- 1999-05-03 lpd Original version.

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